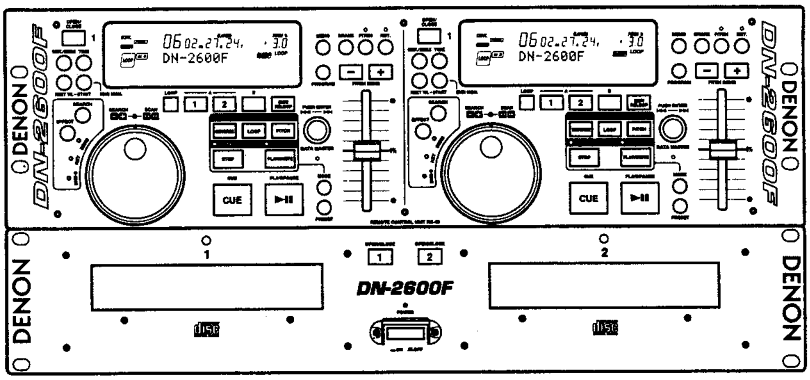
DENON

Hi-Fi Component

SERVICE MANUAL

MODEL DN-2600F

DOUBLE CD PLAYER



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• Some illustrations using in this service manual are slightly different from the actual set.

NIPPON COLUMBIA CO., LTD.

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

SPECIFICATIONS

GENERAL

Type:	Twin mechanism compact disc player with wired remote control		
Disc Type:	Standard compact discs (12 cm and 8 cm discs)		
Dimensions:	Player unit:	482 (W) × 88 (H) × 252 (D) mm (without feet) 18-31/32″ (W) × 3-15/32″ (H) × 9-59/64″ (D)	
	Remote control unit:	482 (W) × 132 (H) × 40 (D) mm (without deet) 18-31/32″ (W) × 5-13/64″ (H) × 1-37/64″ (D)	
Installation:	19-inch rack mountable		
	Player unit:	2U	
	Remote control unit:	3U	
	Player unit:	6 kg (13.23 ibs.)	
	Remote control unit:	3 kg (6.614 lbs.)	
Power Supply:	U.S.A. & Canada model:	120 V AC	±10 %, 60 Hz
	Europe & U.K. model:	230 V AC	±10 %, 50 Hz
Power Consumption:	26 W		
Environmental Conditions:	Operational temperature:	5 to 35 °C (41 to 95 ±F)	
	Operational humidity:	25 to 85 % (no condensation)	
	Storage temperature:	-20 to 60 °C (4 to 140 °F)	

AUDIO SECTION

Quantization:	16-bit linear per channel	
Sampling Frequency:	44.1 kHz at normal pitch	
Oversampling Rate:	8 times	
Frequency response:	20 to 20,000 Hz	
Analog output		
Output Level:	1.9 V	
Digital Output:		
Signal Format:	SPDIF	
Output Level:	0.5 Vp-p 75 Ω/ohms	
Load impedone:	10 kΩ/kohms or more	

FUNCTIONS

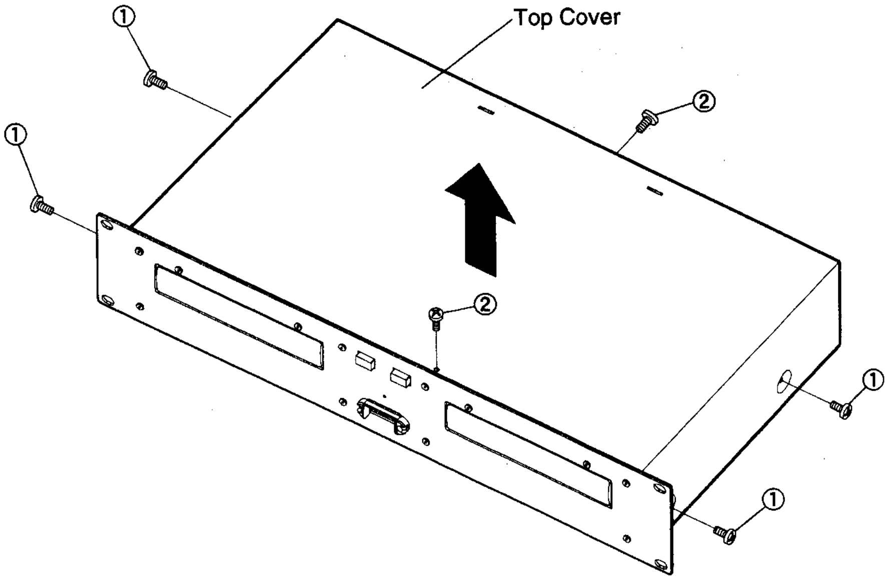
Instant Start:	Within 20 msec.	
Variable Pitch:	10 % range:	±10 % or more
	16 % range:	±16 % or more
Pitch Bend:	±32 % or more	
Sampling Length:	15 sec.	
Search Precision:	1/75 sec (1 subcode frame)	
Max. Scan Speed:	Over 20 times normal speed	
Max. Memory Steps:	300 steps	

DISASSEMBLY

(Follow the procedure below in reverse order when reassembling)

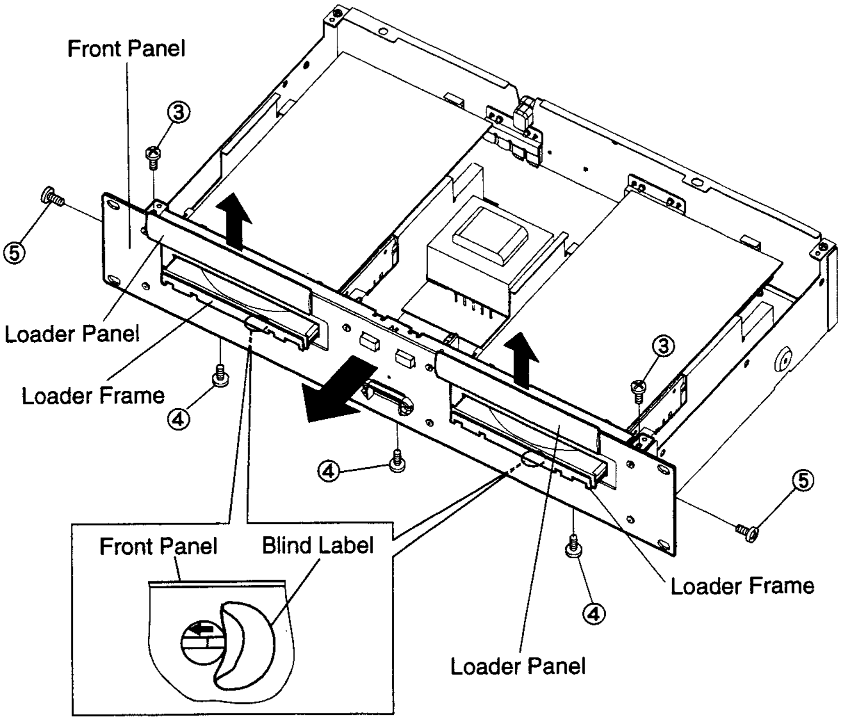
Top Cover

1. Remove 4 screws ① on both sides, and 2 screws ②.
2. Pull up Top Cover.


①
Top Cover
②
①
②
①
①

Front Panel

1. Detach 2 Blind Labels on the bottom chassis.
2. Move CD Mecha Rack in the arrow direction through the label detached chassis opening. Loader Frame comes out.
3. Pull up Loader Panel while pulling it towards front.
4. Remove 2 upper screws ③ and 3 lower screws ④, and 2 screws ⑤ on both sides.
5. Detach Front Panel.

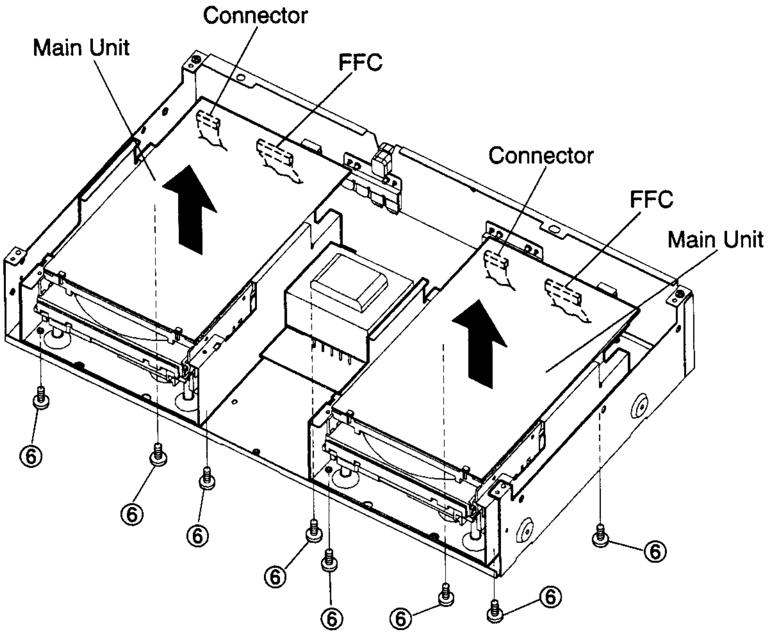

Front Panel
③
⑤
Loader Panel
Loader Frame
④
④
③
⑤
Front Panel
Blind Label
Loader Frame
④
Loader Panel

Mechanism Unit

1. Disconnect FFC cable and Connector.
2. Remove 8 screw ⑥.

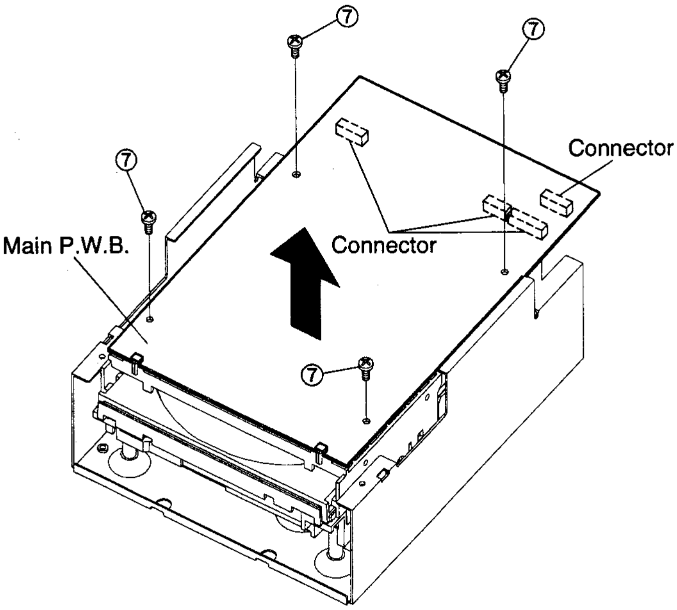
Notes: ● Do not pull out aslant to prevent the FFC cable from damage.

● Do not fail to pull out AC cord from wall outlet before disconnecting the FFC cable. If the AC cord is remained plugged into wall outlet, the power is kept supplied in the unit, which may cause danger.


Connector
Main Unit
FFC
Connector
FFC
Main Unit
⑥
⑥
⑥
⑥
⑥
⑥
⑥
⑥

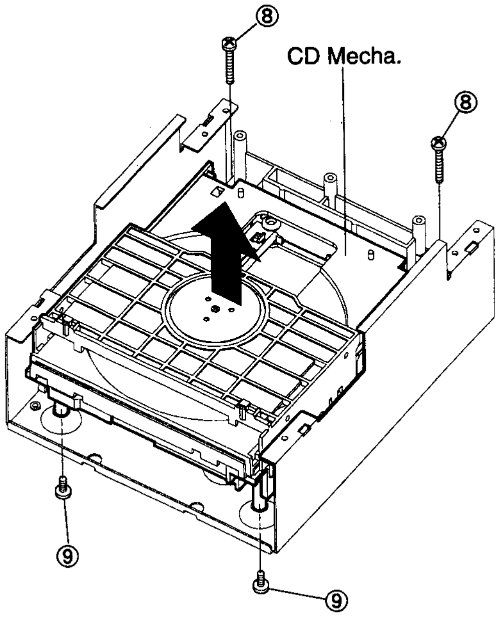
Main P.W.B.

1. Remove 4 screws ⑦.
2. Disconnect Connector.
3. Detach Main P.W.B.


⑦
⑦
⑦
Connector
Main P.W.B.
Connector
⑦

CD Mecha.

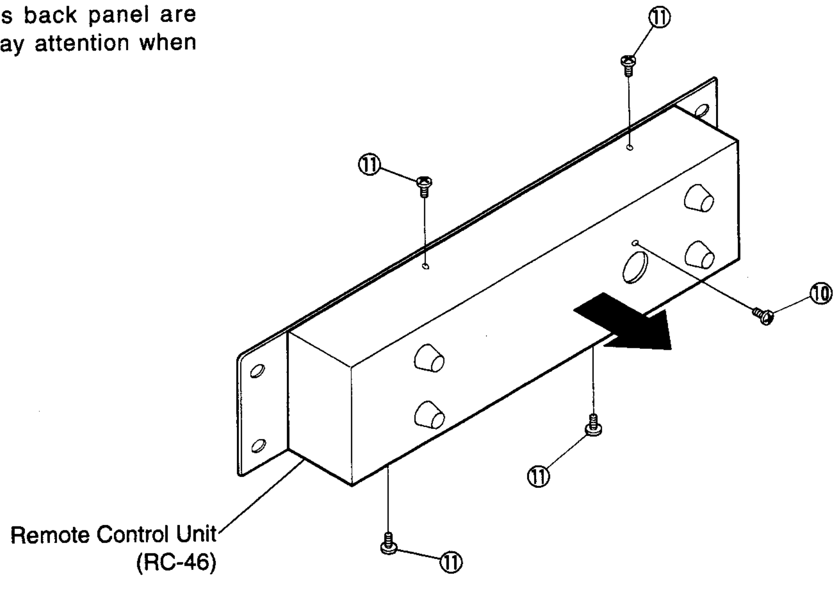
1. Remove 2 upper screws ⑧, and 2 lower screws ⑨.
2. Detach CD Mecha.


⑧
CD Mecha.
⑧
⑨
⑨

Cover (Remote Control Unit)

1. Remove 5 screws (1 × ⑩ and 4 × ⑪).

Note: Remote Control Unit and its back panel are connected with cables, so pay attention when removing the back panel.


⑪
⑪
⑩
⑪
Remote Control Unit
(RC-46)
⑪

CONFIRMING THE SERVO

CAUTION:
The Optical Pick-up used for CD player may invite defection by an external noise, such as electrostatic, etc., please pay the following attention.
1. Use a conductive mat on a working table to avoid electrostatic charge.
2. A working personnel should use a wrist strap to ground human body.
3. Tools, etc., specially for a soldering iron must use with its tip grounded to prevent leakage of electricity.
Utmost care must be taken to your clothes for electrostatic charging in a low humidity environment.

Required Measuring Implement

1. Dual trace oscilloscope
2. Reference disc (TCD784 or CO-74176)

1. What is Service Program

Service program is a special program intended for confirming servo functions etc.

2. Actuating the Service Program and Servo Confirming Method

1. Turn the power switch off.
2. While pushing the CD1's PITCH BEND + button and CD2's OPEN/CLOSE button simultaneously, turn the power on.
3. "Servic Mode" is indicated on the display. μcom GEN No. appear as follows, RC μcom GEN No. → Min & Sec, Mecha. μcom GEN No. → Frm & Next TR.
4. Turn SELECT knob clockwise. The display shows " 0 1 " and "OPEN/CLOSE". At this mode, each pressing of the SELECT knob opens or closes the tray.
5. Set the reference disc (TCD784 or CO-74176) while the tray is open.
6. Turn SELECT knob clockwise again. The display shows " 0 2 " and "TR Signal".
   At this mode, tracking error signal can be observed with connection below (Fig1).
   To start measuring, press the SELECT knob.
7. Turn SELECT knob clockwise again. The display shows " 0 3 " and "HF Signal".
   At this mode, HF signal can be observed with connection below (Fig2).
   To start measuring, press the SELECT knob. ("HF Signal" is indicated when TR servo on)
8. Turn SELECT knob clockwise again. The display shows " 0 4 " and "Servo Data".
   At this mode, servo automatic adjustment data can be called using JOG dial. (see Table below)
   To start adjustment, press the SELECT knob.

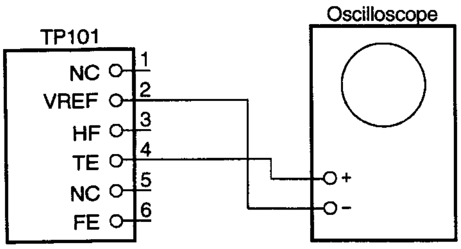


Fig1

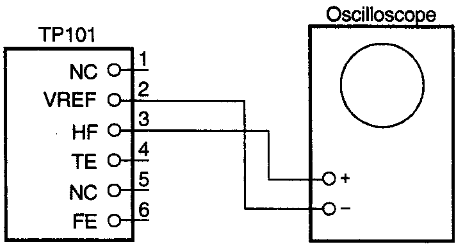


Fig2

	Adjustment Item	Adjustment Value indication at character portions.
1	Focus Gain	FOG 154 ~ 804
2	Focus Balance	FBAL –125 ~ 125
3	Focus Offset	FOFS –35 ~ 35
4	Tracking Gain	TrG 102 ~ 645
5	Tracking Balance	TBAL –110 ~ 86
6	Tracking Offset	TOFS –15 ~ 15

* When adjustment range exceeds, replace pick-up.

3. Contents of Service Program

Switch on the power while pushing the CD1's PITCH BEND + button and CD2's OPEN/CLOSE button at the same time. After actuating the servo program, select an aiming process number with the SELECT knob, FIL/REVERSE button, RVB/LOOP button, or FLG/PITCH button. Press the SELECT knob to execute the selected process, the process number is then displayed on the track indicator of the display. To exit from the service program, just switch off the power.

	Process No. (TRACK Indication)	Function	Contents
SELECT knob	01	OPEN/CLOSE	Performs open/close each time when the SELECT knob is pushed.
	02	Tracking Error	Check tracking error signal, then performs the Automatic Adjustment.
	03	HF Signal	Check HF signal.
	04	Automatic Adjustment call	Turn the JOG dial to display the Automatic Adjustment data.
	05	Cleaning of Pick-up Lens	Press SELECT knob. ("PU. Clean" is displayed.) Pick-up moves outward, and cleaning of the pick-up lens possible.
	06	Focus Gain Changing	Select Gain with JOG dial. Press SELECT knob, the display lights that will be newly memorized in EEPROM. Selectable level appears on the indicator SEC, while current Focus Gain level appears on the NEXT TR ("FO Gain" is displayed.). When select data becomes big or small, the Gain is up or down. In normal, do not change the data that is set by 4. The set No. stored in the EEPROM:
	07	Tracking Gain Changing	Select Gain with JOG dial. Press SELECT knob, the display lights that will be newly memorized in EEPROM. Selectable level appears on the indicator SEC, while current Tracking Gain level appears on the NEXT TR ("Tr Gain" is displayed.). When select data becomes big or small, the Gain is up or down. In normal, do not change the data that is set by 2. When sound out is occurred by oscillation, please raise the Gain. But there is sound out easily by defective disc. The set No. stored in the EEPROM:
	08	Error Code Check	Turn the JOG dial to display the logging error codes in the occurred order. ("Error Data" is displayed.) 10 error logs are memorized at maximum. Kinds of Error Code, displayed (1) Error Code Table (Appears only at Heat Run and Chucking Test function) (2) E204 ····· Servo down during cue (3) E205 ····· Servo down during pause (4) E206 ····· Servo down during manual search and scan (5) E213 ····· Unable to read the subcode during cue (6) E214 ····· Unable to read the subcode during pause (7) E215 ····· Unable to read the subcode during the manual serach and scan Pressing SELECT knob enters to data erase mode. ("Error Clear?" is displayed.) If the SELECT knob is pushed again, the memorized error data are cleared.
	09	Total Running Time	Total time span of servo function that counted by the hour is displayed. ("Total Time" is displayed.) The display time is less than 65535 hours. Note: No time is counted if powered down within 59 minutes. Pressing SELECT knob enters to data erase mode. ("Time Clear?" is displayed.) If the SELECT knob is pushed again, the memorized time data are cleared.

	Process No. (TRACK Indication)	Function	Contents
FIL/REVERCE button	H1	Heat Run	Starting with the PLAY/PAUSE button, it repeats open/close of the tray and playback. All tracks are played back if the track count is less than 20. Only the first and last tracks are played back if the tracks are more than 21. When any errors, it stops and indicates error code (see Error Code Table).
RVB/LOOP, button	H2	Chucking Test	Starting with the PLAY/PAUSE button, it repeats open/close of the tray, servo on, and TOC read. The display shows the number of the tray operation. When any errors, it stops and indicates error code (see Error Code Table).
FLG/PITCH button	H3	Playing Test	Selecting this mode and pushing the PLAY/PAUSE button starts 0.9 x speed playback, but with no sound. One more pushing of the PLAY/PAUSE button during playback changes it to be 1.8 × speed playback. Desired track can be selected with the SELECT knob during playback. The following are displayed on each indicators, ● TRACK: Track number ● FRAME: Playback speed 1 or 2 (1:0.9 2:1.8) ● CHARACTER: "Test Play 1" or "Test Play 2"

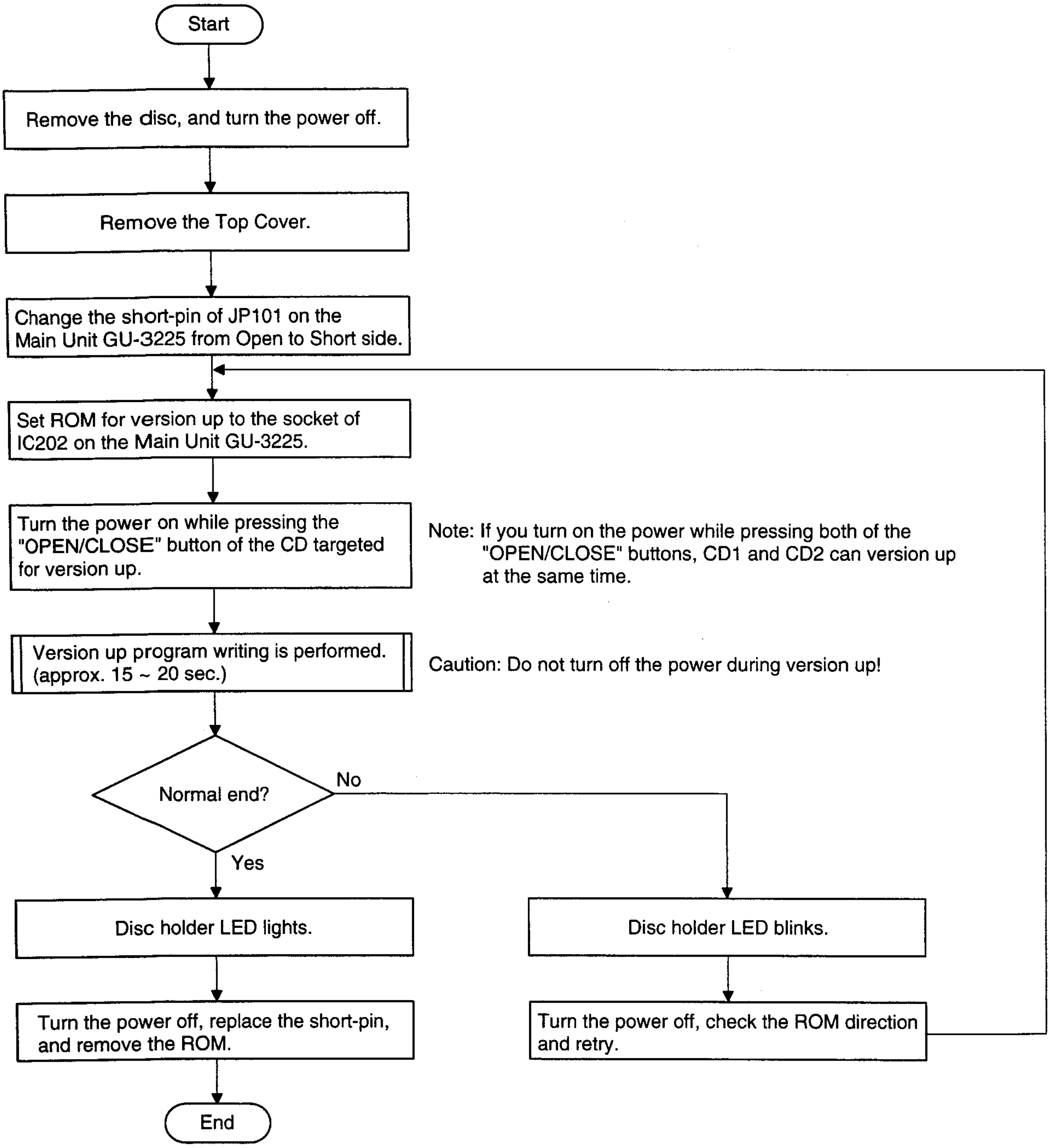
Error Code Table (Appears only at Heat Run and Chucking Test function)

Error Code	Contents
	Automatic Adjustment Error
E1 00	Unable to detect disc
E1 01	Unable to adjust tracking offset
E1 02	Unable to adjust focus offset
E1 03	Unable to adjust focus fine gain
E1 04	Unable to actuate focus
E1 05	Unable to actuate tracking
E1 06	Unable to adjust tracking fine gain
E2 00	Servo down during playback
E2 01	Servo down during search
E2 02	Servo down during automatic adjustment
E2 03	Servo down during TOC read
E2 10	Unable to read the subcode between 500 msec. during the playback
E2 11	Unable to read the subcode between 1 sec. during the search
E2 12	Unable to read the subcode between 500 msec. during the TOC read
E3 00	Unable to read TOC
E4 00	Unable to close the disc holder in the regular time
E4 01	Unable to open the disc holder in the regular time
E5 00	Slide error
E5 01	Slide error during search
E8 00	Unable to store consecutive data due to track jump during data memorizing in the shock-proof memory.

Detailed error can be displayed by JOG dial when error occurs.

Error Indication				
TR	MIN	SEC	FRAM	CHARACTER
Displays the track No. in which error occurred.	Displays the time at which error occurred.			“H**** E***” Operation count Error code
				Indication state when error occurs
				“FOG ***” (FG data)
				“FBAL ***” (FBAL data)
				“FOFS ***” (FOFS data)
				“TrG ***” (TG data)
				“TBAL ***” (TBAL data)
				“TOFS ***” (TOFS data)

MECHA-µCOM VERSION UP



Remove the disc, and turn the power off.

Remove the Top Cover.

Change the short-pin of JP101 on the Main Unit GU-3225 from Open to Short side.

Set ROM for version up to the socket of IC202 on the Main Unit GU-3225.

Turn the power on while pressing the "OPEN/CLOSE" button of the CD targeted for version up.

Note: If you turn on the power while pressing both of the "OPEN/CLOSE" buttons, CD1 and CD2 can version up at the same time.

Version up program writing is performed. (approx. 15 ~ 20 sec.)

Caution: Do not turn off the power during version up!

Disc holder LED lights.

Turn the power off, replace the short-pin, and remove the ROM.

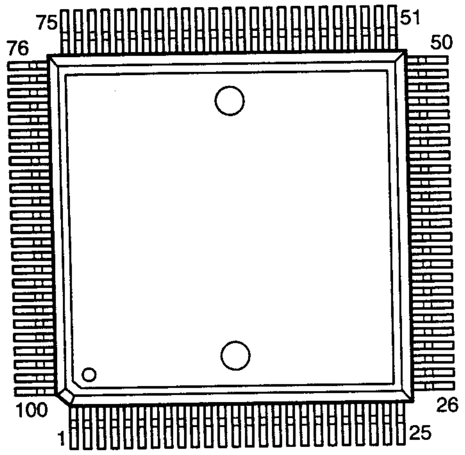
Disc holder LED blinks.

Turn the power off, check the ROM direction and retry.

SEMICONDUCTORS

- **IC's**

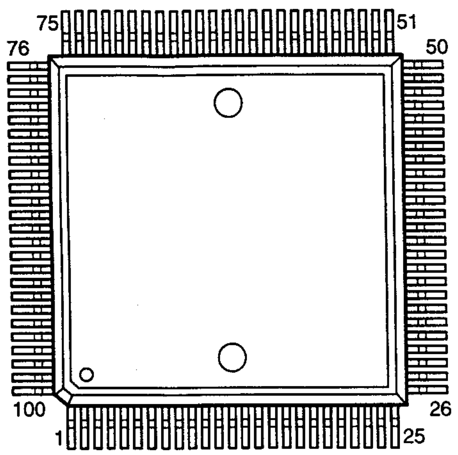
MN102LF61GAC (Main Unit: IC201)
MECHA µCOM



MN102LF61GAC Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	P60, WAIT	CDSEL	I	—	—	—	—	Mecha. No. select signal, L: Mecha.1, H: Mecha.2
2	RE_	RE_	O	—	—	—	—	ROM read enable output
3	WEL_	WEL_	O	—	—	—	—	Not used (open)
4	WEH_	WEH_	O	—	—	—	—	Not used (open)
5	CS0_	CS0_	O	—	—	—	—	ROM chip select
6	CS1_	CS1_	O	—	—	—	—	Not used (open)
7	CS2_	CS2_	O	—	—	—	—	Not used (open)
8	CS3_	CS3_	O	—	—	—	—	Not used (open)
9	P54	LDOUT_	I	—	Pu	—	H	Tray open complete signal
10	P55	LDIN_	I	—	Pu	—	H	Tray close complete signal
11	P56	DLOAD	I	—	Pd	—	L	ROM rewrite signal, H: Rewrite
12	WORD_	WORD	I	—	—	—	—	Fixed to 5V, H: 8-bit bus
13	A00	A00	O	—	—	—	—	Address bus 00, 1M-bit ROM connect
14	A01	A01	O	—	—	—	—	Address bus 01
15	A02	A02	O	—	—	—	—	Address bus 02
16	A03	A03	O	—	—	—	—	Address bus 03
17	VDD	VDD	—	—	—	—	—	Power (+5V)
18	SYSCLK	SYSCLK	O	—	—	—	—	System clock output (OSCI × 1/2), not used
19	Vss	Vss	—	—	—	—	—	GND (0V)
20	XI	XI	I	—	—	—	—	Fixed to GND
21	XO	XO	O	—	—	—	—	Not used (open)
22	VDD	VDD	—	—	—	—	—	Power (+5V)
23	OSCI	OSCI	I	—	—	—	—	X'tal input terminal, 20MHz
24	OSCO	OSCO	O	—	—	—	—	X'tal output terminal
25	MODE	MODE	I	—	—	—	—	Fixed to H, H: Single chip mode
26	A04	A04	O	—	—	—	—	Address bus 04
27	A05	A05	O	—	—	—	—	Address bus 05
28	A06	A06	O	—	—	—	—	Address bus 06
29	A07	A07	O	—	—	—	—	Address bus 07
30	A08	A08	O	—	—	—	—	Address bus 08
31	A09	A09	O	—	—	—	—	Address bus 09
32	A10	A10	O	—	—	—	—	Address bus 10
33	A11	A11	O	—	—	—	—	Address bus 11
34	VDD	VDD	—	—	—	—	—	Power (+5V)
35	A12	A12	O	—	—	—	—	Address bus 12
36	A13	A13	O	—	—	—	—	Address bus 13
37	A14	A14	O	—	—	—	—	Address bus 14
38	A15	A15	O	—	—	—	—	Address bus 15
39	A16	A16	O	—	—	—	—	Address bus 16
40	A17	A17	O	—	—	—	—	Address bus 17, not used
41	A18	A18	O	—	—	—	—	Address bus 18, not used
42	P43	SCL	O	—	Pu	—	—	X24C00 data clock
43	Vss	Vss	—	—	—	—	—	GND (0V)
44	P44	SDA	I/O	—	Pu	—	—	X24C00 data (normal input)
45	P45	CONT1	I	—	Pu	—	H	External control signal 1
46	P46	CONT2	I	—	Pu	—	H	External control signal 2
47	P47	DSPSCL	I/O	—	Pu	H	H	MN19413 clock signal
48	P80	DSPSDA	I/O	—	Pu	H	H	MN19413 data signal
49	P81	ADDR_	O	—	Pu	H	H	MN19413 command address signal, L: Same address
50	P82	SMRST_	O	—	Pd	L	L	SM5902AF/MN19413 reset signal
51	P83	YMLD_	O	—	Pu	H	H	SM5902AF data latch signal
52	P84	ZSENSE	I	—	—	—	—	SM5902AF status signal
53	P85	MCLK	O	—	—	H	—	MN662724, SM5902AF, BU2618 clock signal
54	VDD	VDD	—	—	—	—	—	Power (+5V)
55	P86	MDATA	O	—	—	H	—	MN662724, SM5902AF, BU2618 data signal
56	TM6IOB	ZLRCK	I	—	—	—	—	SM5902AF LRCK signal
57	P90	MLD_	O	—	Pu	H	H	MN662724 data latch signal
58	TM7IOA	SMPCLK	O	—	—	—	—	MN19413 sampler clock signal
59	P92	SENSE	I	—	—	—	—	MN662724 servo on status input signal
60	P93	FLOCK_	I	—	—	—	—	MN662724 focus servo on input signal
61	Vss	Vss	—	—	—	—	—	GND (0V)
62	P94	TLED	O	—	Pd	L	L	Tray LED, H: light
63	P95	TLOCK_	I	—	—	—	—	MN662724 tracking servo on input signal
64	P96	STAT	I	—	—	—	—	MN662724 servo status input signal (includes TLOCK)
65	P97	MNRST_	O	—	Pd	L	L	MN662724 reset signal
66	VDD (Vpp)	VDD	—	—	—	—	—	Power (+5V)
67	SBTO	SQCK	O	—	Pu	H	H	MN662724 sub-code read out clock signal
68	SBIO	SUBQ	I	—	Pu	—	H	MN662724 sub-code data input signal
69	P72	RESY	I	—	—	—	—	MN662724 frame sync re-sync signal, H: Sync
70	P73	EJECT_	I	—	Pu	—	—	Disc holder open/close SW input signal
71	SBI1	RXD	I	—	Pu	—	H	Data receive from RC
72	SBO1	TXD	O	—	Pu	H	H	Data send to RC
73	TEST1	TEST1	I	—	—	—	—	Fixed with 47k pull-up
74	TEST2	TEST2	I	—	—	—	—	Fixed with 47k pull-up
75	NMI_	NMI_	I	—	—	—	—	Fixed to 5V
76	PA0, IRQ0	BLKCK	I	Ed	—	—	—	MN662724 sub-code input (interrupt)
77	PA1, IRQ1_	STAT1	I	Ed	—	—	—	MN19413 status signal
78	PA2, IRQ2_	STAT2	I	Ed	—	—	—	MN19413 status signal
79	PA3, IRQ3_	INSW_	I	Lv	Pu	—	H	Slide inner circle SW input
80	PA4, IRQ4_	BSYIN_	I	Lv	Pu	—	H	RC serial TXD line in-use input signal, L: In-use
81	ADSEP_	ADSEP	I	—	—	—	—	Fixed to 5V, H: Address/data separate mode
82	RST_	RST_	I	—	—	—	—	CPU reset
83	VDD	VDD	—	—	—	—	—	Power (+5V)
84	P00	BSYOUT_	O	—	Pu	H	H	RC serial TXD line in-use output signal, L: In-use
85	P01	RESERVE	O	—	—	L	—	Not used (open)
86	P02	RESERVE	O	—	—	L	—	Not used (open)
87	P03	PLAY	O	—	—	L	—	In-trace signal, H: Trace
88	P04	AMUTE	O	—	Pu	H	H	Analog mute signal
89	P05	OPEN_	O	—	Pu	L	H	Tray open SW
90	P06	CLOSE_	O	—	Pu	L	H	Tray close SW
91	P07	MCE_	O	—	Pu	H	H	BU2618 (main clock) enable signal
92	Vss	Vss	—	—	—	—	—	GND (0V)
93	D08	D00	I/O	—	—	—	—	Data bus 0
94	D09	D01	I/O	—	—	—	—	Data bus 1
95	D10	D02	I/O	—	—	—	—	Data bus 2
96	D11	D03	I/O	—	—	—	—	Data bus 3
97	D12	D04	I/O	—	—	—	—	Data bus 4
98	D13	D05	I/O	—	—	—	—	Data bus 5
99	D14	D06	I/O	—	—	—	—	Data bus 6
100	D15	D07	I/O	—	—	—	—	Data bus 7

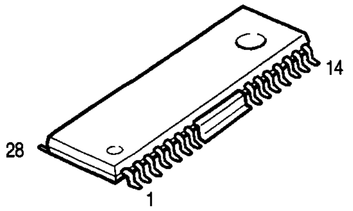
MN102L2503 (Display Unit: IC101)
µCOM

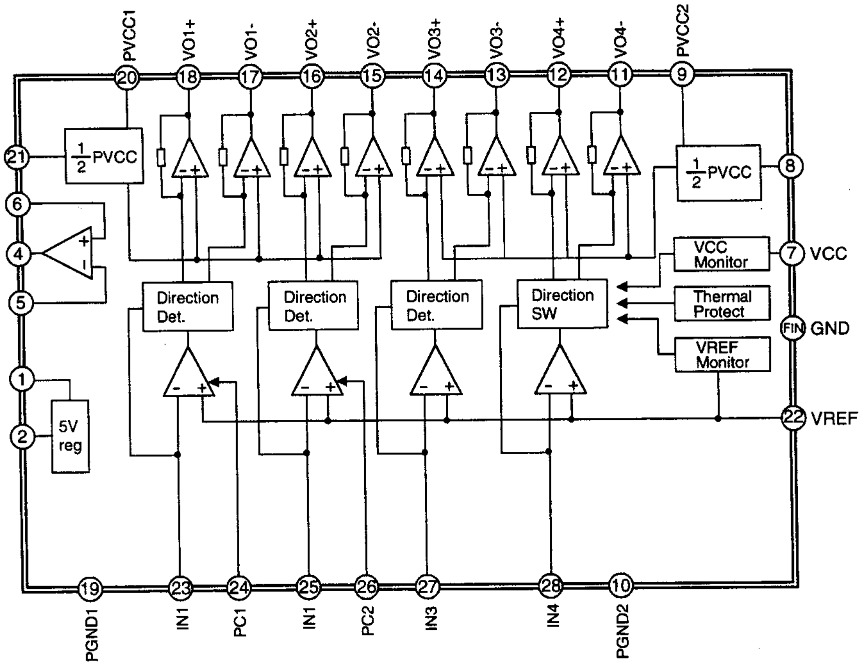


MN102L2503 Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	P60, WAIT	PUSH1_	I	—	Pu	—	H	CD1 track select encoder push input
2	RE_	RE_	O	—	—	—	—	ROM/EEPROM read enable output
3	WEL_	WEL_	O	—	—	—	—	Not used (open)
4	WEH_	WEH_	O	—	—	—	—	EEPROM write enable
5	CS0_	CS0_	O	—	—	—	—	ROM chip select
6	CS1_	CS1_	O	—	—	—	—	EEPROM chip select
7	CS2_	CS2_	O	—	—	—	—	Not used (open)
8	CS3_	CS3_	O	—	—	—	—	Not used (open)
9	P54, BREQ_	FLCS2_	O	—	Pu	H	H	CD2 M66004FSP latch signal
10	P55, BRACK_		O	—	—	L	—	Reserved
11	BSTRE_	BSTRE_	O	—	—	—	—	Not used (open)
12	WORD_	WORD	I	—	—	—	—	Fixed to 5V, H: 8-bit bus
13	A00	A00	O	—	—	—	—	Address bus 00, 256kbit ROM connect
14	A01	A01	O	—	—	—	—	Address bus 01
15	A02	A02	O	—	—	—	—	Address bus 02
16	A03	A03	O	—	—	—	—	Address bus 03
17	VDD	VDD	—	—	—	—	—	Power (+5V)
18	SYSCLK	SYSCLK	O	—	—	—	—	System clock output (OSCI x 1/2)
19	Vss	Vss	—	—	—	—	—	GND (0V)
20	XI	XI	I	—	—	—	—	Fixed to GND
21	XO	XO	O	—	—	—	—	Not used (open)
22	VDD	VDD	—	—	—	—	—	Power (+5V)
23	OSCI	OSCI	I	—	—	—	—	X'tal input terminal, 12.288MHz
24	OSCO	OSCO	O	—	—	—	—	X'tal output terminal
25	MODE	MODE	I	—	Pd	—	—	Fixed to L, L: Processor mode
26	A04	A04	O	—	—	—	—	Address bus 04
27	A05	A05	O	—	—	—	—	Address bus 05
28	A06	A06	O	—	—	—	—	Address bus 06
29	A07	A07	O	—	—	—	—	Address bus 07
30	A08	A08	O	—	—	—	—	Address bus 08
31	A09	A09	O	—	—	—	—	Address bus 09
32	A10	A10	O	—	—	—	—	Address bus 10
33	A11	A11	O	—	—	—	—	Address bus 11
34	VDD	VDD	—	—	—	—	—	Power (+5V)
35	A12	A12	O	—	—	—	—	Address bus 12
36	A13	A13	O	—	—	—	—	Address bus 13
37	A14	A14	O	—	—	—	—	Address bus 14
38	A15	A15	O	—	—	—	—	Address bus 15, not used
39	A16	A16	O	—	—	—	—	Address bus 16, not used
40	A17	A17	O	—	—	—	—	Address bus 17, not used
41	A18	A18	O	—	—	—	—	Address bus 18, not used
42	A19	A19	O	—	—	—	—	Address bus 19, not used
43	Vss	Vss	—	—	—	—	—	GND (0V)
44	A20	A20	O	—	—	—	—	Address bus 20, not used
45	A21	A21	O	—	—	—	—	Address bus 21, not used
46	A22, STOP, AN6, P46	TRS2B	I	—	Pu	—	H	CD2 track select encoder B input
47	A23, WDOUT, AN7, P47	PUSH2_	I	—	Pu	—	H	CD2 track select encoder push input
48	TM0IO, P80	KEYIN0_	I	—	Pu	—	H	CD1/2 key scan input 0
49	TM1IO, P81	KEYIN1_	I	—	Pu	—	H	CD1/2 key scan input 1
50	TM2IO, P82	KEYIN2_	I	—	Pu	—	H	CD1/2 key scan input 2
51	TM3IO, P83	KEYIN3_	I	—	Pu	—	H	CD1/2 key scan input 3
52	TM4IO, P84	RESERVE	O	—	Pd	L	L	Not used (TP change)
53	TM5IO, P85	KEY0	O	—	—	L	—	CD1/2 key scan output 0
54	VDD	VDD	—	—	—	—	—	Power (+5V)
55	TM6IOA, P86	KEY1	O	—	—	L	—	CD1/2 key scan output 1
56	TM6IOB, P87	KEY2	O	—	—	L	—	CD1/2 key scan output 2
57	TM610C, P90	KSEL2_	O	—	Pd	L	L	CD2 key scan select signal, H: Select
58	TM7IOA, P91	CUEL2	O	—	Pd	L	L	CD2 CUE LED, H: Light (TP change)
59	TM7IOB, P92	PLAYL2	O	—	Pd	L	L	CD2 PLAY LED, H: Light (TP change)
60	TM71C, P93	LCLK2	O	—	—	H	—	Clock signal for CD2 LED2 data output
61	Vss	Vss	—	—	—	—	—	GND (0V)
62	AN0, P94	PITC1	I	—	—	—	—	CD1 pitch VR center value signal
63	AN1, P95	PIT1	I	—	—	—	—	CD1 pitch VR signal
64	AN2, P96	PITC2	I	—	—	—	—	CD2 pitch VR center value signal
65	AN3, P97	PIT2	I	—	—	—	—	CD2 pitch VR signal
66	VDD (Vpp)	VDD	—	—	—	—	—	Power (+5V)
67	SBT0, P70	JOG2B	I	—	Pu	—	H	CD2 jog encoder B input
68	SBI0, P71	RC-RXD	I	—	Pu	—	H	Data receive from RC
69	SBO0, P72	RC-TXD	O	—	Pu	H	H	Data send to RC
70	SBT1, P73	JOG1B	I	—	Pu	—	H	CD1 jog encoder B input
71	SBI1, P74	RXD	I	—	Pu	—	H	Data receive from main unit
72	SBO1, P75	TXD	O	—	Pu	H	H	Data send to main unit
73	TEST1	TEST1	I	—	—	—	—	Fixed with 47k pull-up
74	TEST2	TEST2	I	—	—	—	—	Fixed with 47k pull-up
75	NMI_	NMI	I	—	—	—	—	Fixed to 5V
76	PA0, IRQ0_	TRS1A	I	Ed	Pu	—	H	CD1 track select encoder A interrupt input
77	PA1, IRQ1_	TRS2A	I	Ed	Pu	—	H	CD2 track select encoder A interrupt input
78	PA2, IRQ2_	JOG1A	I	Ed	Pu	—	H	CD1 jog encoder A interrupt input
79	PA3, IRQ3_	JOG2A	I	Ed	Pu	—	H	CD2 jog encoder A interrupt input
80	PA4, IRQ4_	TRS1B	I	—	Pu	—	H	CD1 track select encoder B input
81	ADSEP_	ADSEP	I	—	—	—	—	Fixed to 5V, H: Address/data separate mode
82	RST_	RST_	I	—	—	—	—	CPU reset
83	VDD	VDD	—	—	—	—	—	Power (+5V)
84	P00, D00	PRES_	O	—	Pd	L	L	CD1/2 M66004FSP reset signal
85	P01, D01	FLCLK	O	—	—	H	—	Clock signal for CD1/2 M66004FSP data output
86	P02, D02	DATA	O	—	—	—	—	CD1/2 M66004FSP LED data signal
87	P03, D03	FLCS1_	O	—	Pu	H	H	CD1 M66004FSP latch signal
88	P04, D04	CUEL1	O	—	Pd	L	L	CD1 CUE LED, H: Light (TP change)
89	P05, D05	PLAYL1	O	—	Pd	L	L	CD1 PLAY LED, H: Light (TP change)
90	P06, D06	LCLK1	O	—	—	H	—	Clock signal for CD1 LED1 data output
91	P07, D07	KSEL1_	O	—	Pd	L	L	CD1 key scan select signal, H: Select
92	Vss	Vss	—	—	—	—	—	GND (0V)
93	D08	D00	I/O	—	—	—	—	Data bus 0
94	D09	D01	I/O	—	—	—	—	Data bus 1
95	D10	D02	I/O	—	—	—	—	Data bus 2
96	D11	D03	I/O	—	—	—	—	Data bus 3
97	D12	D04	I/O	—	—	—	—	Data bus 4
98	D13	D05	I/O	—	—	—	—	Data bus 5
99	D14	D06	I/O	—	—	—	—	Data bus 6
100	D15	D07	I/O	—	—	—	—	Data bus 7

AN8816SB (Main unit: IC101)
PU DRIVER



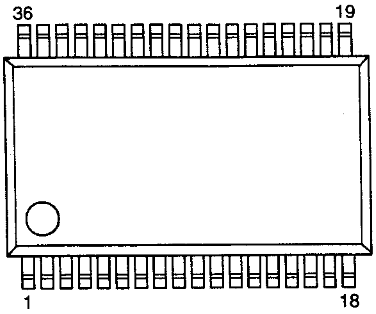

PVCC1
VO1+
VO1-
VO2+
VO2-
VO3+
VO3-
VO4+
VO4-
PVCC2
20
18
17
16
15
14
13
12
11
9
21
1/2 PVCC
1/2 PVCC
8
6
4
5
7 VCC
VCC Monitor
Thermal Protect
FIN GND
VREF Monitor
Direction Det.
Direction Det.
Direction Det.
Direction SW
1
2
5V reg
22 VREF
19
23
24
25
26
27
28
10
PGND1
IN1
PC1
IN1
PC2
IN3
IN4
PGND2

AN8816SB Terminal Function

Pin No.	Symbol	Function
1	IB	5Vreg external transistor base control terminal
2	VMON	5V regulator output monitor terminal
3	NC	No connection
4	OPO	OP-amp output terminal
5	IN–	OP-amp inverted input terminal
6	IN+	OP-amp non-inverted input terminal
7	Vcc	Power supply terminal
8	1/2PVCC2	1/2 PVCC output terminal 2
9	PVCC2	Power supply terminal 2 for driver
10	PGND2	Ground terminal 2 for driver
11	VO4–	Motor driver 4 inverted output terminal
12	VO4+	Motor driver 4 non-inverted output terminal
13	VO3–	Motor driver 3 inverted output terminal
14	VO3+	Motor driver 3 non-inverted output terminal
15	VO2–	Motor driver 2 inverted output terminal
16	VO2+	Motor driver 2 non-inverted output terminal
17	VO1–	Motor driver 1 inverted output terminal
18	VO1+	Motor driver 1 non-inverted output terminal
19	PGND1	Ground terminal 1 for driver
20	PVCC1	Power supply terminal 1 for driver
21	1/2PVCC1	1/2 PVCC output terminal 1
22	VREF	VREF input terminal
23	IN1	Motor driver 1 input terminal
24	PC1	PC (power cut) input terminal 1
25	IN2	Motor driver 2 input terminal
26	PC2	PC (power cut) input terminal 2
27	IN3	Motor driver 3 input terminal
28	IN4	Motor driver 4 input terminal

Note: FIN grounded

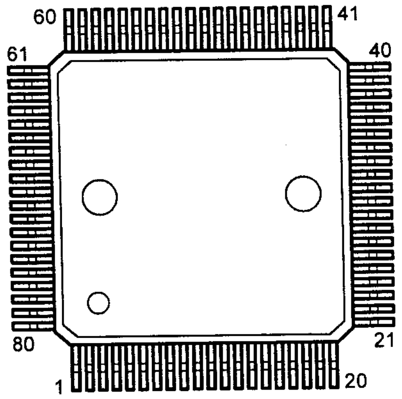
AN8807SB (Main unit: IC102)
RF AMP



AN8807 Terminal Function

Pin No	Symbol	I/O	Function
1	PD	I	PD signal input for output monitor of LD.
2	LD	O	Connect to external transistor's base for LD drive.
3	LDON	I	LD APC ON/OFF switching signal.
4	C.CRS	—	Capacitor connecting terminal for CROSS.
5	VCC	—	Power supply connecting terminal.
6	$\overline{\text{RF}}$	I	RF AMP reversal input terminal. Connect a resistor.
7	RFOUT	O	RF AMP output terminal (reversal AMP).
8	RFIN	I	Input terminal of RF AGC.
9	C. AGC	—	Capacitor connecting terminal for RF AGC loop filter.
10	ARF	O	RF output terminal of after AGC.
11	C. ENV	—	Capacitor connecting terminal for RF.
12	C. EA	—	Capacitor connecting terminal for AMP.
13	C. SBDO	—	Capacitor connecting terminal for low speed detection of dark level DO detection.
14	BDO	O	BDO detection output terminal. Positive logic.
15	C. SBRT	—	Capacitor connecting terminal for low speed detection of OFTR detection.
16	OFTR	O	Output terminal of OFF TRACK detection. Positive logic.
17	NRFDET	O	Output terminal of RF signal amplitude detection. Negative logic.
18	GND	—	GND
19	ENV	O	ENV output terminal.
20	VREF	O	VCC x 0.5(V) output terminal.
21	LD OFF	I	Input terminal of LD APC forcible stop.
22	VDET	O	Output terminal of vibration detection.
23	TEBPF	I	Input terminal of vibration detection.
24	CROSS	O	Output terminal of TE CROSS detection signal.
25	TEOUT	O	Output terminal of TEAMP.
26	$\overline{\text{TE}}$	I	TEAMP reversal input terminal. Connect a resistor.
27	FEOUT	O	Output terminal of FEAMP.
28	$\overline{\text{FE}}$	I	FEAMP reversal input terminal. Connect a resistor.
29	FBAL	I	Control signal input terminal of FO balance adjustment.
30	TBAL	I	Control signal input terminal of TE balance adjustment.
31	PDFR	—	Resistor connecting terminal for setting IV converting resistance value of PDE.
32	PDER	—	Resistor connecting terminal for setting IV converting resistance value of PDF.
33	PDE	I	Connect to PIN diode E.
34	PDF	I	Connect to PIN diode F.
35	PDBD	I	Connect to B, D of astigmatism 1/4 divided PD.
36	PDAC	I	Connect to A, C of astigmatism 1/4 divided PD.

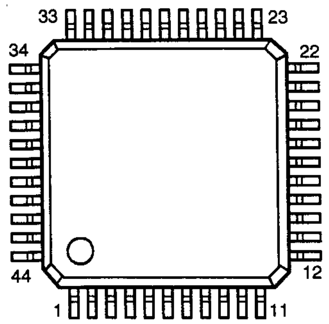
MN662724RPE (Main unit: IC103)
CD SERVO PROCESSOR



MN662724RPE Terminal Function

Pin No.	Symbol	I/O	Function
1	BCLK	O	Bit clock output for SRDATA.
2	LRCK	O	L,R discrimination signal output.
3	SRDATA	O	Serial data output.
4	DVDD1	—	Power supply for digital circuit.
5	DVSS1	—	GND for digital circuit.
6	TX	O	Digital audio interface output signal.
7	MCLK	I	Microcomputer command clock signal input (latches data at rising edge).
8	MDATA	I	Microcomputer command data input.
9	MLD	I	Microcomputer command load signal input. ("L": load)
10	SENSE	O	Sens signal output (OFT,, FESL,, NACEND,, NAJEND,, POSAD,, SFG).
11	$\overline{\text{FLOCK}}$	O	Focus servo draw in signal ("L": draw in state).
12	$\overline{\text{TLOCK}}$	O	Tracking servo draw in signal ("L": draw in state).
13	BLKCK	O	Subcode block clock signal (fGLKCK=75Hz).
14	SQCK	I	External clock input for subcode Q register.
15	SUBQ	O	Subcode Q code output.
16	DMUTE	I	Muting input ("H": mute).
17	STAT	O	Status signal (CRC,, CUE,, CLVS,, TTSTOP,, FCLV,, SQOK).
18	$\overline{\text{RST}}$	I	Reset input ("L": reset).
19	SMCK	O	8.4672MHz clock signal output at MSEL="H". 4.2336MHz clock signal output at MSEL="L".
20	PMCK	O	88.2kHz clock output.
21	TRV	O	Traverse forcible sending output.
22	TVD	O	Traverse drive output.
23	PC	O	Spindle motor ON signal ("L": ON).
24	ECM	O	Spindle motor drive signal (forcible mode output). 3-state.
25	ECS	O	Spindle motor drive signal (servo error signal output).
26	KICK	O	Kick pulse output.
27	TRD	O	Tracking drive output.
28	FOD	O	Focus drive output.
29	VREF	I	Reference voltage for DA output portion (TVD,BCS,TRD,FOD,FBAL,TBAL).
30	FBAL	O	Focus balance adjusting output.
31	TBAL	O	Tracking balance adjusting output.
32	FE	I	Focus error signal input (analog input).
33	TE	I	Tracking error signal input (analog input).
34	RFENV	I	RF envelope signal input (analog input).
35	VDET	I	Vibration detecting signal input ("H": detect).
36	OFT	I	Off track signal input ("H": off track).
37	TRCRS	I	Track cross signal input.
38	$\overline{\text{RFDET}}$	I	RF detecting signal input ("L": detect).
39	BDO	I	Drop out signal input ("H": drop out).
40	LDON	O	Laser ON signal output ("H": ON).
41	PLLF2	I/O	Loop filter terminal for PLL.
42	PLAY	O	Play signal output ("H": play).
43	WVEL	O	Double speed status signal output.
44	ARF	I	RF signal input.
45	IREF	I	Reference current input terminal.
46	DRF	I	Bias terminal for DSL.
47	DSLF	I/O	Loop filter terminal for DSL.
48	PLLF	I/O	Loop filter terminal for PLL.
49	VCOF	I/O	Loop filter terminal for VCO.
50	AVDD2	—	Power supply for analog circuit (for DSL,, PLL,, DA output sections).
51	AVSS2	—	GND for analog circuit (for DSL,, PLL,, DA output sections).
52	CK384	O	384 fs clock output.
53	PCK	O	PLL extract clock output (fPCK=4.321MHz).
54	TOFS	O	Tracking offset adjust signal output.
55	SUBC	O	Subcode serial output data output.
56	SBCK	I	Clock input for subcode serial output.
57	VSS	—	GND for osc. circuit.
58	X1	I	X'tal osc. circuit input terminal. f=16.9344MHz or 33.8688MHz.
59	X2	O	X'tal osc. circuit output terminal (use 33.8688MHz at double speed PB).
60	VDD	—	Power supply for osc. circuit.
61	BYTCK	O	Byte clock output.
62	$\overline{\text{CLDCK}}$	O	Subcode frame clock signal output (fCLDCK=7.35kHz).
63	FCLK	O	X'tal frame clock output (fFCLK=7.35kHz).
64	IPFLAG	O	Interpolation flag output ("H": interpolation).
65	FLAG	O	Flag output.
66	CLVS	O	Spindle servo phase sync state signal output ("H":CLV,, "L":rough servo).
67	CRC	O	Subcode CRC check result output ("H":OK,, "L":NG).
68	DEMPH	O	Deemphasis detecting signal output ("H":ON).
69	RESY	O	Flag 6 output at SSEL:"H"(RAM address reset generating signal by Jitter margin over of CLV servo. "L":address reset generates). RESY output at SSBL:"L"(Re-sync signal output of frame sync. "H": sync,, "L":out sync).
70	SDAT48	O	48 fs serial data output.
71	$\overline{\text{TEST}}$	I	Test terminal (normally "H").
72	AVDD1	—	Power supply for digital circuit.
73	LRCK48	O	48 fs L, R discrimination signal output.
74	AVSS1	—	GND for digital circuit.
75	BCLK48	O	48 fs bit clock output for SDAT48.
76	RSEL	I	RF signal polarity specify terminal (RSEL="H" at brightness level "H". RSEL="L" at brightness level "L").
77	CSEL	I	X'tal osc. frequency specify terminal,, X'tal osc. freq. 33.8688MHz:CSEL"H",, 16.9344MHz:CSEL"L".
78	PSEL	I	Test terminal (normally "L").
79	MSEL	I	SMCK terminal. Output frequency shifting terminal ("H":SMCK=8.4672MHz,"L":SMCK=4.2336MHz).
80	SSEL	I	Sub Q teminal. Output mode shifting terminal ("H":Q code buffer using mode).

SM5902AF (Main unit: IC301))
SHOCK PROOF MEMORY CONTROLLER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44
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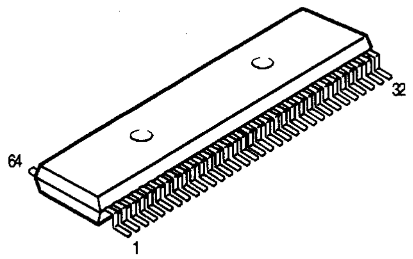
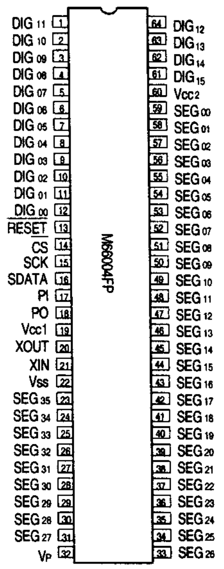
1
11

SM5902AF Terminal Function

Pin No.	Symbol	I/O	Function	Setting	
				H	L
1	$V_{DD}2$	—	V_{DD} power supply terminal.		
2	UC1	IP/O	Microcomputer interface extended I/O 1. Not Used (OPEN)		
3	UC2	IP/O	Microcomputer interface extended I/O 2. Not Used (OPEN)		
4	UC3	IP/O	Microcomputer interface extended I/O 3. Not Used (OPEN)		
5	UC4	IP/O	Microcomputer interface extended I/O 4. Not Used (OPEN)		
6	UC5	IP/O	Microcomputer interface extended I/O 5. Not Used (OPEN)		
7	DIT	O	Digital audio interface terminal.		
8	NTEST	IP	Test terminal.		Test
9	CLK	I	16.9344 MHz clock input.		
10	Vss	—	Ground terminal.		
11	YSRDATA	I	Audio serial input data.		
12	YLRCK	I	Audio serial input LR clock.	Lch	Rch
13	YSCK	I	Audio serial input bit clock.		
14	ZSCK	O	Audio serial output bit clock.		
15	ZLRCK	O	Audio serial output LR clock.	Lch	Rch
16	ZSRDATA	O	Audio serial output data.		
17	YFLAG	I	RAM overflow flag for signal processing IC.		Over
18	YFCLK	I	X'tal system frame clock.		
19	YBLKCK	I	Sub-code block clock signal.		
20	NRESET	I	System reset terminal.		Reset
21	ZSENSE	O	Microcomputer interface status output.		
22	$V_{DD}1$	—	V_{DD} power supply terminal.		
23	YDMUTE	I	Forcible mute terminal.	Mute	
24	YMLD	I	Microcomputer interface latch clock.		
25	YMDATA	I	Microcomputer interface serial data.		
26	YMCLK	I	Microcomputer interface shift clock.		
27	A10	O	DRAM address 10.		
28	NCAS	O	DRAM CAS control.		
29	D2	I/O	DRAM data input/output 2.		
30	D3	I/O	DRAM data input/output 3.		
31	D0	I/O	DRAM data input/output 0.		
32	D1	I/O	DRAM data input/output 1.		
33	NWE	O	DRAM WE control.		
34	NRAS	O	DRAM RAS control.		
35	A9	O	DRAM address 9.		
36	A8	O	DRAM address 8.		
37	A7	O	DRAM address 7.		
38	A6	O	DRAM address 6.		
39	A5	O	DRAM address 5.		
40	A4	O	DRAM address 4.		
41	A0	O	DRAM address 0.		
42	A1	O	DRAM address 1.		
43	A2	O	DRAM address 2.		
44	A3	O	DRAM address 3.		

M66004FP (Display unit: IC201, 301))

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DIG 10 2
DIG 09 3
DIG 08 4
DIG 07 5
DIG 06 6
DIG 05 7
DIG 04 8
DIG 03 9
DIG 02 10
DIG 01 11
DIG 00 12
RESET 13
CS 14
SCK 15
SDATA 16
PI 17
PO 18
Vcc1 19
XOUT 20
XIN 21
Vss 22
SEG 35 23
SEG 34 24
SEG 33 25
SEG 32 26
SEG 31 27
SEG 30 28
SEG 29 29
SEG 28 30
SEG 27 31
Vp 32
64 DIG 12
63 DIG 13
62 DIG 14
61 DIG 15
60 Vcc2
59 SEG 00
58 SEG 01
57 SEG 02
56 SEG 03
55 SEG 04
54 SEG 05
53 SEG 06
52 SEG 07
51 SEG 08
50 SEG 09
49 SEG 10
48 SEG 11
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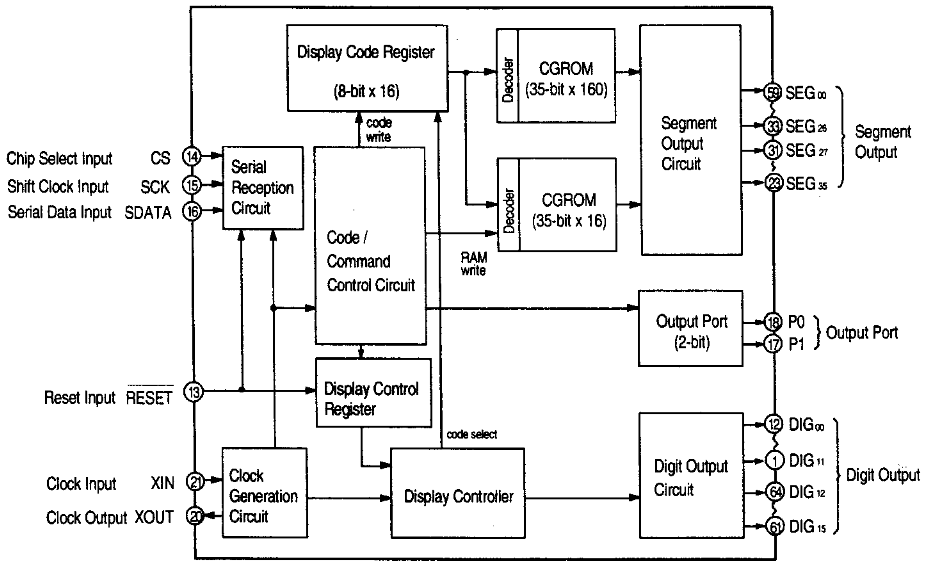
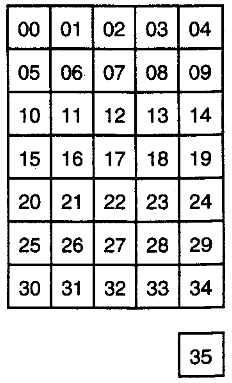
33 SEG 26
M66004FP


Display Code Register
(8-bit x 16)
code write
Decoder
CGROM (35-bit x 160)
Decoder
CGROM (35-bit x 16)
Segment Output Circuit
Chip Select Input CS 14
Shift Clock Input SCK 15
Serial Data Input SDATA 16
Serial Reception Circuit
Code / Command Control Circuit
RAM write
Output Port (2-bit)
Reset Input RESET 13
Display Control Register
code select
Clock Input XIN 21
Clock Output XOUT 20
Clock Generation Circuit
Display Controller
Digit Output Circuit
59 SEG 00
33 SEG 26
31 SEG 27
23 SEG 35
Segment Output
18 P0
17 P1
Output Port
12 DIG 00
1 DIG 11
64 DIG 12
61 DIG 15
Digit Output

M66004FP Terminal Function

Symbol	Name	Function
RESET	Reset Input	Initializes internal state of M66004.
CS	Chip Select Input	Able to communicate with MCU in "L" mode. Command from MCU will be disregareded in "H" mode.
SCK	Shift Clock Input	Shifts input data at rise from "L" to "H".
SDATA	Serial Data Input	Inputs character code or command data needed to display from MSB.
XIN XOUT	Clock Input Clock Output	Sets oscillation frequency by connecting external resistor and capacitor (maximum oscillation frequency fosc (max)=1MHz). Also feasible to apply external clock. In this case, inject external clock to Xin terminal and open Xout terminal.
DIG00 ~ DIG15	Digit Output	Connect to digit terminal of VFD. DIG00~DIG15 correspond to the 1st figure to 16th figure respectively.
SEG00 ~ SEG35	Segment Output	Connect to segment terminal of VFD. For corresponding SEG00~SEG35 to segment terminal of VFD, refer to the figure right.
P0, P1		Output port (static operation).
Vcc1		Positive power supply terminal for internal logic.
Vcc2		Positive power supply terminal for high tension output port.
Vss		GND terminal.
Vp		Negative power supply terminal for VFD drive.

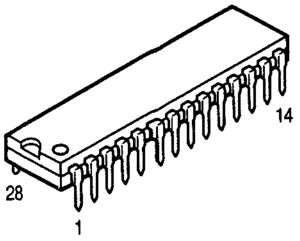
(Forwarding connection of segment output terminal.)

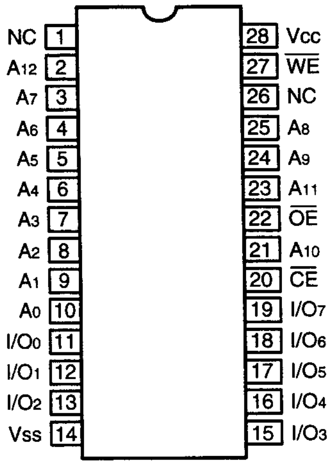


00	01	02	03	04
05	06	07	08	09
10	11	12	13	14
15	16	17	18	19
20	21	22	23	24
25	26	27	28	29
30	31	32	33	34
				35

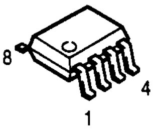
☐ in the right figure indicates 1 dot of segment, the figure in ☐ shows the segment output terminal number (00 ~ 35) to be connected.

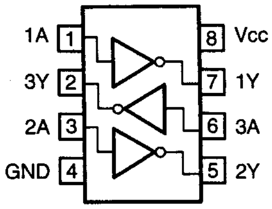
CAT28C64BP (Display unit: IC102)
8KB EEP ROM



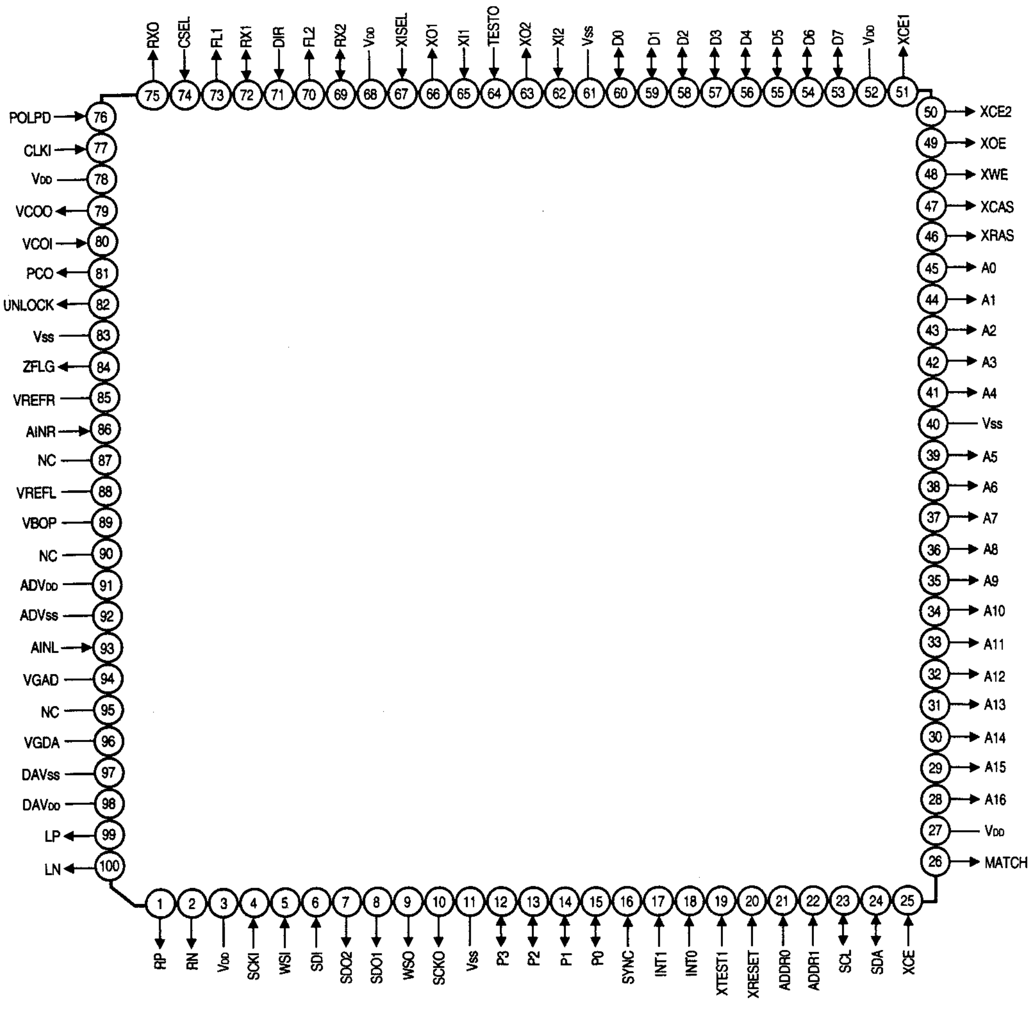

NC 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
I/O0 11
I/O1 12
I/O2 13
Vss 14
28 Vcc
27 WE
26 NC
25 A8
24 A9
23 A11
22 OE
21 A10
20 CE
19 I/O7
18 I/O6
17 I/O5
16 I/O4
15 I/O3

TC7WU04F (Power unit: IC701, 702)

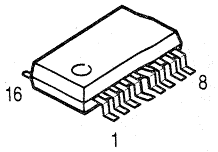


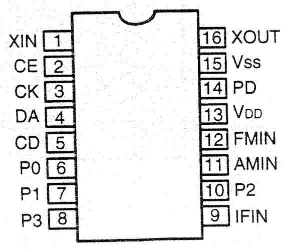

1A 1
3Y 2
2A 3
GND 4
8 Vcc
7 1Y
6 3A
5 2Y

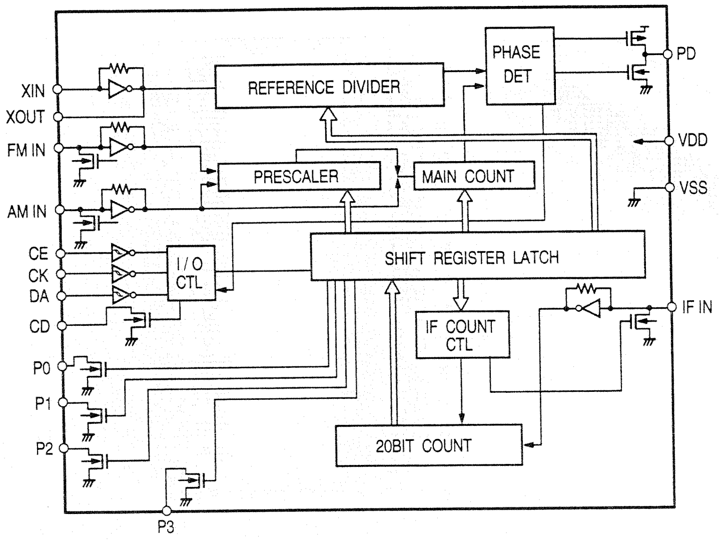
MN19413A (Main unit: IC401, 402)
AUDIO SIGNAL PROCESSOR


RP 1
RN 2
VDD 3
SCKI 4
WSI 5
SDI 6
SDO2 7
SDO1 8
WSO 9
SCKO 10
Vss 11
P3 12
P2 13
P1 14
P0 15
SYNC 16
INT1 17
INT0 18
XTEST1 19
XRESET 20
ADDR0 21
ADDR1 22
SCL 23
SDA 24
XCE 25
MATCH 26
VDD 27
A16 28
A15 29
A14 30
A13 31
A12 32
A11 33
A10 34
A9 35
A8 36
A7 37
A6 38
A5 39
Vss 40
A4 41
A3 42
A2 43
A1 44
A0 45
XRAS 46
XCAS 47
XWE 48
XOE 49
XCE2 50
XCE1 51
VDD 52
D7 53
D6 54
D5 55
D4 56
D3 57
D2 58
D1 59
D0 60
Vss 61
XI2 62
XO2 63
TESTO 64
XI1 65
XO1 66
XISEL 67
VDD 68
RX2 69
FL2 70
DIR 71
RX1 72
FL1 73
CSEL 74
RXO 75
POLPD 76
CLKI 77
VDD 78
VCOO 79
VCOI 80
PCO 81
UNLOCK 82
Vss 83
ZFLG 84
VREFR 85
AINR 86
NC 87
VREFL 88
VBOP 89
NC 90
ADVDD 91
ADVss 92
AINL 93
VGAD 94
NC 95
VGDA 96
DAVss 97
DAVDD 98
LP 99
LN 100

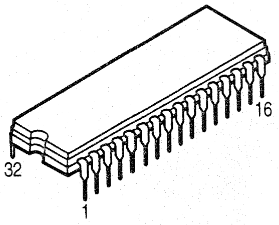
BU2618 (Main unit: IC303)

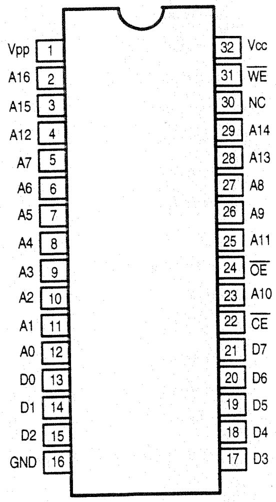



XIN 1
CE 2
CK 3
DA 4
CD 5
P0 6
P1 7
P3 8
16 XOUT
15 Vss
14 PD
13 VDD
12 FMIN
11 AMIN
10 P2
9 IFIN

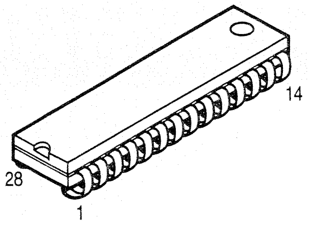

XIN
XOUT
FM IN
AM IN
CE
CK
DA
CD
P0
P1
P2
P3
REFERENCE DIVIDER
PHASE DET
PD
VDD
VSS
PRESCALER
MAIN COUNT
I / O CTL
SHIFT REGISTER LATCH
IF COUNT CTL
IF IN
20BIT COUNT

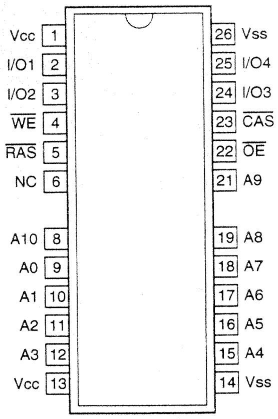
CAT28F010-09 (Display unit: IC103)
FLASH MEMORY

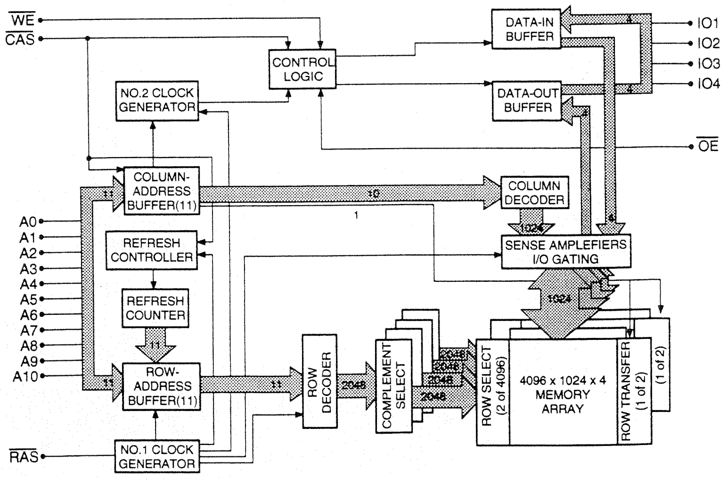



Vpp 1
A16 2
A15 3
A12 4
A7 5
A6 6
A5 7
A4 8
A3 9
A2 10
A1 11
A0 12
D0 13
D1 14
D2 15
GND 16
32 Vcc
31 WE
30 NC
29 A14
28 A13
27 A8
26 A9
25 A11
24 OE
23 A10
22 CE
21 D7
20 D6
19 D5
18 D4
17 D3

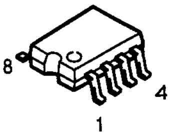
GM71C17400C or T2316400A
(Main unit: IC302, 403 ~ 406)
16M DRAM

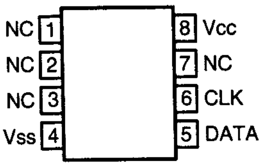



Vcc 1
I/O1 2
I/O2 3
WE 4
RAS 5
NC 6
A10 8
A0 9
A1 10
A2 11
A3 12
Vcc 13
26 Vss
25 I/O4
24 I/O3
23 CAS
22 OE
21 A9
19 A8
18 A7
17 A6
16 A5
15 A4
14 Vss

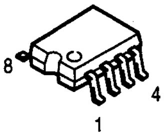

WE
CAS
CONTROL LOGIC
DATA-IN BUFFER
DATA-OUT BUFFER
IO1
IO2
IO3
IO4
OE
NO.2 CLOCK GENERATOR
COLUMN-ADDRESS BUFFER(11)
COLUMN DECODER
10
1
1024
SENSE AMPLIFIERS I/O GATING
4
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
11
REFRESH CONTROLLER
REFRESH COUNTER
ROW-ADDRESS BUFFER(11)
ROW DECODER
2048
COMPLEMENT SELECT
ROW SELECT (2 of 4096)
4096 x 1024 x 4 MEMORY ARRAY
ROW TRANSFER (1 of 2)
(1 of 2)
RAS
NO.1 CLOCK GENERATOR

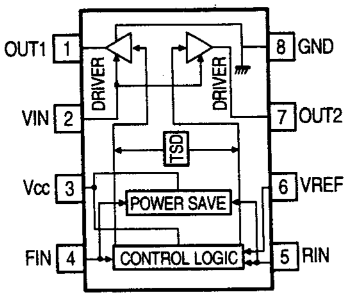
X24C00S (Power unit: IC602)
EEPROM



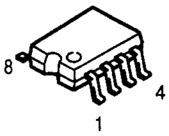

NC 1
NC 2
NC 3
Vss 4
8 Vcc
7 NC
6 CLK
5 DATA

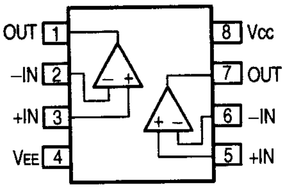
BA6287F (Main unit: IC104)
LOADING DRIVER



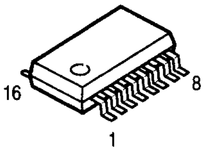

OUT1 1
VIN 2
Vcc 3
FIN 4
8 GND
7 OUT2
6 VREF
5 RIN
DRIVER
DRIVER
TSD
POWER SAVE
CONTROL LOGIC

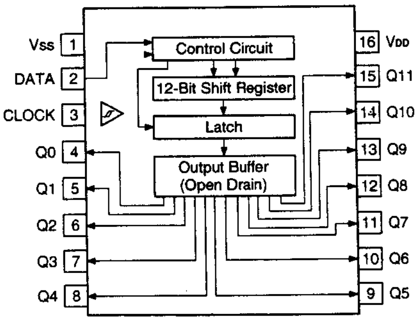
BA15218F (Main unit: IC409, 410, 501)



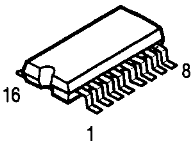

OUT 1
−IN 2
+IN 3
VEE 4
8 Vcc
7 OUT
6 −IN
5 +IN

BU2090F (Display unit: IC203, 303)
LED DRIVER

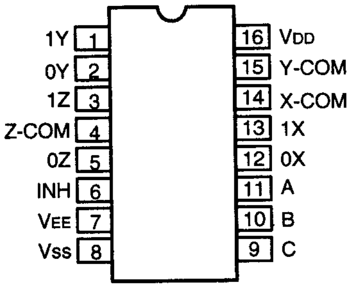



Vss 1
DATA 2
CLOCK 3
Q0 4
Q1 5
Q2 6
Q3 7
Q4 8
16 VDD
15 Q11
14 Q10
13 Q9
12 Q8
11 Q7
10 Q6
9 Q5
Control Circuit
12-Bit Shift Register
Latch
Output Buffer
(Open Drain)

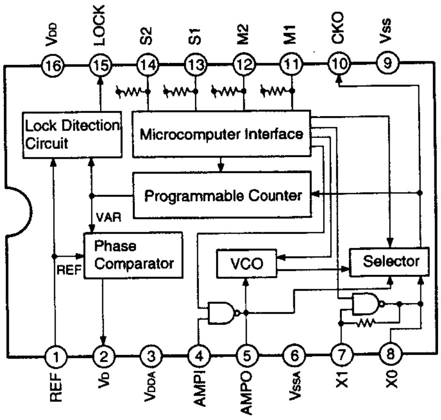
TC4053BF (Main unit: IC407, 408)
TC9246F (Main unit: IC305, 306)
TC74AC138F (Display unit: IC202, 302)
MAX202CSE (Display unit: IC105)
(Power unit: IC601)



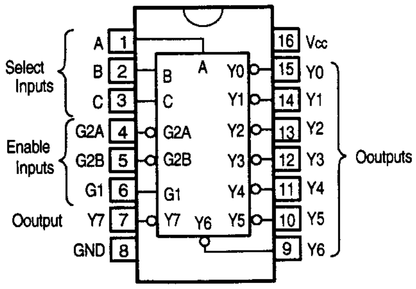
TC4053BF


1Y 1
0Y 2
1Z 3
Z-COM 4
0Z 5
INH 6
VEE 7
Vss 8
16 VDD
15 Y-COM
14 X-COM
13 1X
12 0X
11 A
10 B
9 C

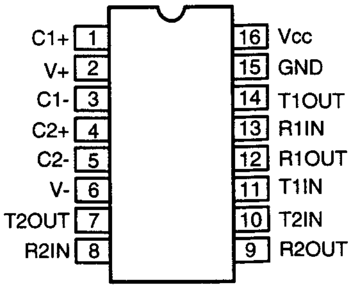
TC9246F


VDD
LOCK
S2
S1
M2
M1
CKO
VSS
16
15
14
13
12
11
10
9
Lock Dictection Circuit
Microcomputer Interface
Programmable Counter
VAR
Phase Comparator
REF
VCO
Selector
1
2
3
4
5
6
7
8
REF
VD
VDDA
AMPI
AMPO
VSSA
X1
X0

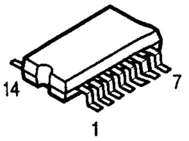
TC74AC138F


Select Inputs
Enable Inputs
Ooutput
A 1
B 2
C 3
G2A 4
G2B 5
G1 6
Y7 7
GND 8
16 Vcc
15 Y0
14 Y1
13 Y2
12 Y3
11 Y4
10 Y5
9 Y6
A
B
C
G2A
G2B
G1
Y7
Y6
Y0
Y1
Y2
Y3
Y4
Y5
Ooutputs

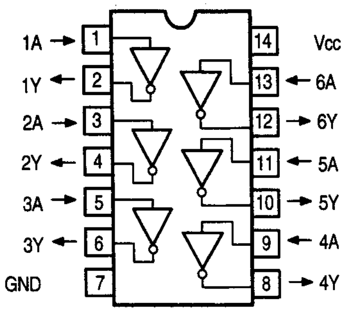
MAX202CSE


C1+ 1
V+ 2
C1- 3
C2+ 4
C2- 5
V- 6
T2OUT 7
R2IN 8
16 Vcc
15 GND
14 T1OUT
13 R1IN
12 R1OUT
11 T1IN
10 T2IN
9 R2OUT

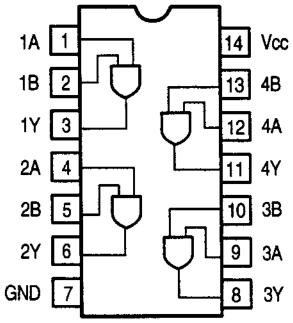
HD74AC04FP (Main unit: IC307)
TC74AC08AF (Power unit: IC603)



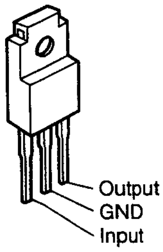
HD74AC04FP


1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

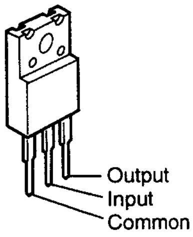
TC74AC08AF


1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7
14 Vcc
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y

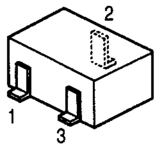
µPC2405AHF
(Display unit: IC601)
(Power unit: IC608, 609, 611 ~ 613)
µPC2406AHF
(Power unit: IC607, 610)


Output
GND
Input

NJM7905FA
(Power unit: IC614)


Output
Input
Common

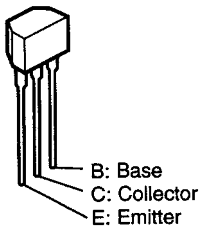
MN1382-R
(Display unit: IC104)
MN1382-S
(Power unit: IC604)



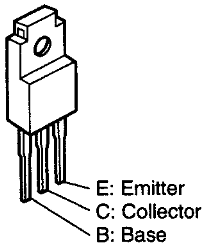
1: Out
2: VDD
3: Vss

● TRANSISTORS

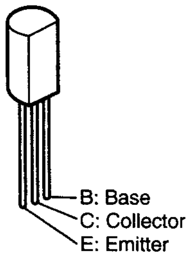
2SD2144S


B: Base
C: Collector
E: Emitter

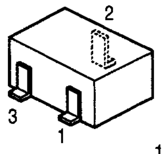
2SB1185 (E/F)


E: Emitter
C: Collector
B: Base

2SB562 (C)

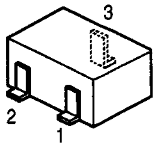

B: Base
C: Collector
E: Emitter

2SC2412K (S)



1: Emitter
2: Base
3: Collector

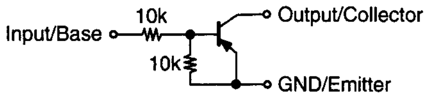
DTA114EK
DTC114EK
DTC143EK



1: GND/Emittor
2: Input/Base
3: Output/Collector

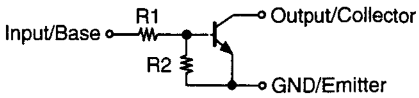
DTA114EK

(PNP Type)


Input/Base
10k
10k
Output/Collector
GND/Emitter

DTC114EK
DTC143EK

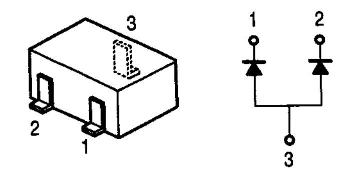
(NPN Type)


Input/Base
R1
R2
Output/Collector
GND/Emitter

	R1	R2
DTC114EK	10 kohm	10 kohm
DTC114EK	4.7 kohm	4.7 kohm

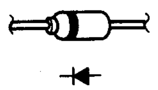
DIODES

DAP202K

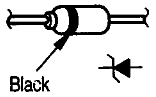


1: Cathode
2: Cathode
3: Anode

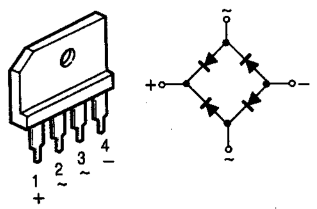
1SS270A



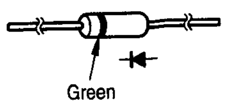
HZS2B-1
HZS6B-3
MTZJ4.3A
MTZJ39E



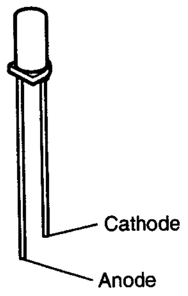
RBA-402



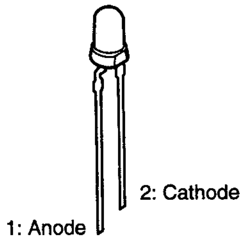
1SR139-200



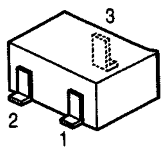
SLR-325DC (Orange)
SLR-325MC (Green)
SLR-325VC (Red)


Cathode
Anode

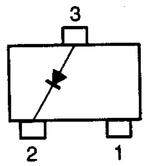
LNX901CFBDA (Blue)


1: Anode
2: Cathode

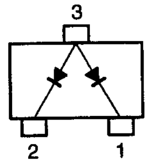
MA151A
MA151WA
MA151WK



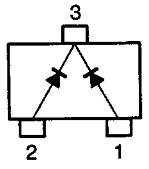
MA151A



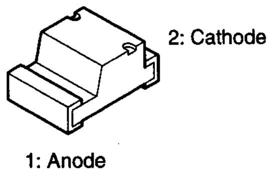
MA151WA



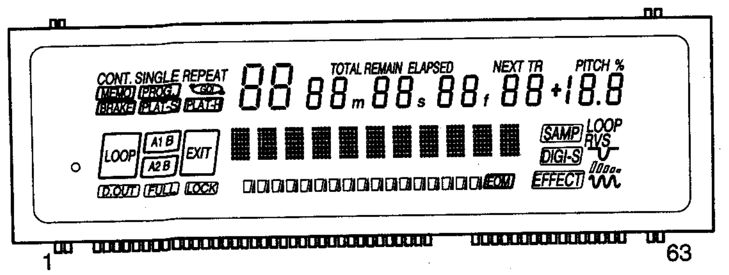
MA151WK



TLGU1002 (Green)
TLOU1002 (Orange)
TLRA1002 (Red)


2: Cathode
1: Anode

FL DISPLAY CM1941M (FL201, 301)


CONT. SINGLE REPEAT
MEMO PROG. GO!
BRAKE PLAT-S PLAT-H
TOTAL REMAIN ELAPSED
NEXT TR
PITCH %
88 88m88s88f88 ±18.8
LOOP A1 B A2 B EXIT
D.OUT FULL LOCK
EOM
SAMP LOOP RVS DIGI-S
EFFECT
1
63

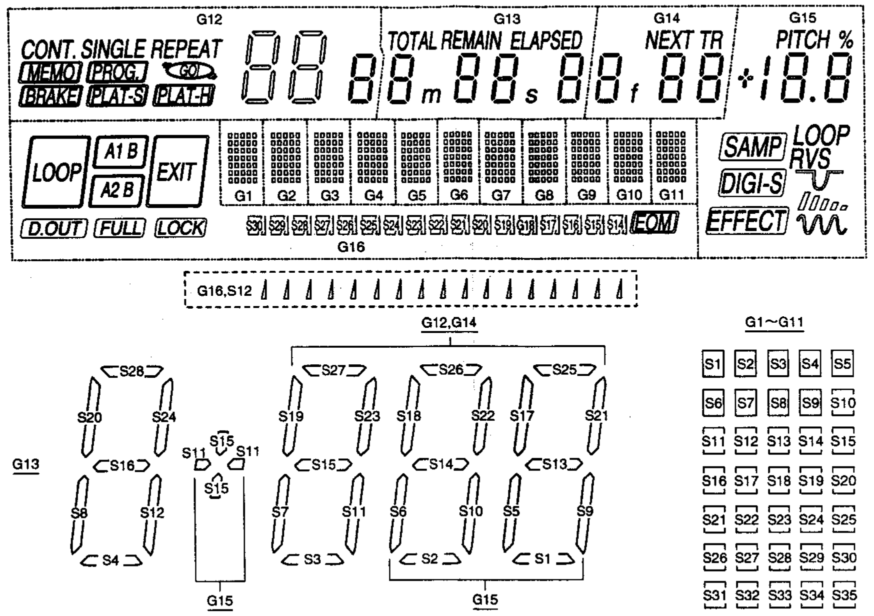
Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Assignment	F1	F1	NP	NP	S35	S34	S33	S32	S31	S30	S29	S28	S27	S26	S25	S24	S23	S22	S21	S20	S19	S18	S17	S16	S15	S14	S13	S12	S11	S10	S9

Pin No.	32	33	34	35	36	37	38	39	40~43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Assignment	S8	S7	S6	S5	S4	S3	S2	S1	NP	G7	G8	G9	G10	G11	G16	G1	G2	G3	G4	G5	G6	G15	G14	G13	G12	NP	NP	F2	F2

Note 1) F1,F2 : Filament 2) G1～G16 : Grid 3) S1～S35 : Anode 4) NP : No Pin

Anode & Grid Assignment


G12
G13
G14
G15
CONT. SINGLE REPEAT
MEMO PROG. GO!
BRAKE PLAT-S PLAT-H
TOTAL REMAIN ELAPSED
NEXT TR
PITCH %
m
s
f
LOOP
A1 B
A2 B
EXIT
G1 G2 G3 G4 G5 G6 G7 G8 G9 G10 G11
SAMP LOOP RVS
DIGI-S
EFFECT
D.OUT FULL LOCK
EOM
G16
G16,S12
G12,G14
G1~G11
G13
S28 S20 S24 S16 S8 S12 S4
S15 S11 S11 S15
S27 S26 S25 S19 S23 S18 S22 S17 S21 S15 S14 S13 S7 S11 S6 S10 S5 S9 S3 S2 S1
G15
G15
S1 S2 S3 S4 S5
S6 S7 S8 S9 S10
S11 S12 S13 S14 S15
S16 S17 S18 S19 S20
S21 S22 S23 S24 S25
S26 S27 S28 S29 S30
S31 S32 S33 S34 S35

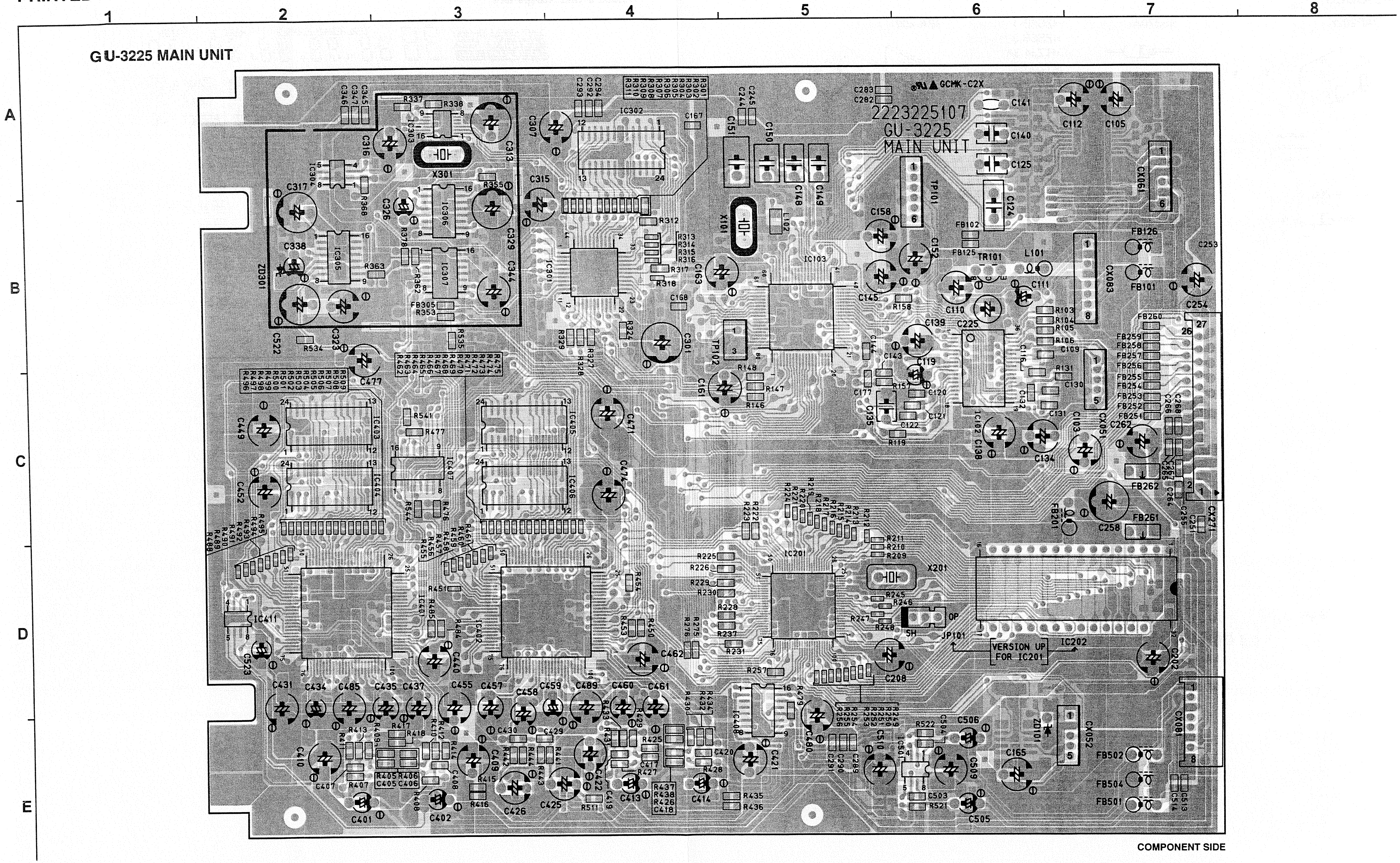
Anode & Grid Connection

	G1~G11	G12	G13	G14	G15	G16
S1	S1	S1	S1	S1	S1	A1
S2	S2	S2	S2	S2	S2	(A1) B
S3	S3	S3	S3	S3	○	A1 B
S4	S4	PLAT-H	S4		〰	LOOP
S5	S5	S5	S5	S5	S5	A2
S6	S6	S6	S6	S6	S6	(A2) B
S7	S7	S7	S7	S7		A2 B
S8	S8	PLAT-S	S8		EFFECT	EXIT
S9	S9	S9	S9	S9	S9	D.OUT
S10	S10	S10	S10	S10	S10	FULL
S11	S11	S11	S11	S11	S11	LOCK
S12	S12	BRAKE	S12			S12
S13	S13	S13	S13	S13	S13	EOM
S14	S14	S14	S14	S14	S14	S14
S15	S15	S15	S15	S15	S15	S15
S16	S16	GO!	S16			S16
S17	S17	S17	S17	S17	S17	S17
S18	S18	S18	S18	S18	S18	S18

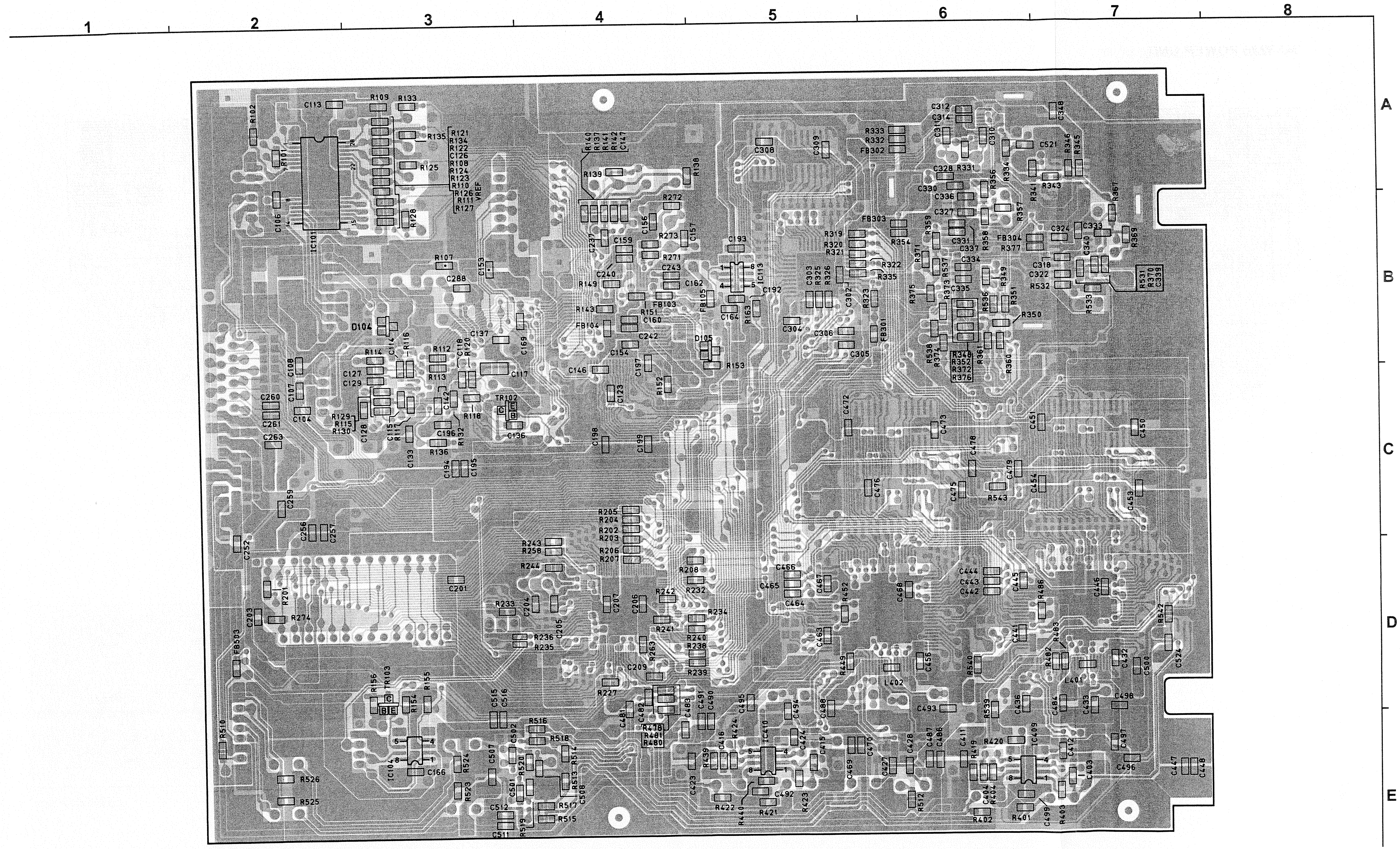
	G1~G11	G12	G13	G14	G15	G16
S19	S19	S19	S19	S19	/	S19
S20	S20	PROG.	S20			S20
S21	S21	S21	S21	S21	S21	S21
S22	S22	S22	S22	S22	S22	S22
S23	S23	S23	S23	S23		S23
S24	S24	MEMO	S24			S24
S25	S25	S25	S25	S25	S25	S25
S26	S26	S26	S26	S26	S26	S26
S27	S27	S27	S27	S27		S27
S28	S28	REPEAT	S28			S28
S29	S29	SIGNAL	ELAPSED	NEXT TR	PITCH %	S29
S30	S30	CONT.	REMAIN		SAMP	S30
S31	S31		TOTAL		LOOP	
S32	S32		m. s	f	RVS	
S33	S33				DIGI-S	
S34	S34				⊔	
S35	S35				▯▯▯▫▫	

PRINTED WIRING BOARDS

GU-3225 MAIN UNIT


1
2
3
4
5
6
7
8
A
B
C
D
E
GCMK-C2X
2223225107
GU-3225
MAIN UNIT
X301
X101
X201
IC301
IC302
IC303
IC304
IC305
IC306
IC307
IC103
IC102
IC201
IC202
IC401
IC402
IC403
IC404
IC405
IC406
IC407
IC408
IC411
TP101
TP102
TR101
L101
L102
CX061
CX083
CX051
CX271
CX052
CX081
ZD301
ZD101
JP101
OP
SH
VERSION UP
FOR IC201

COMPONENT SIDE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A
B
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D
E
C113
R102
R109
R133
R135
R121
R134
R122
C126
R108
R124
R123
R110
R126
R111
R127
VREF
R125
R128
R101
C106
IC101
28
22
15
R140
R137
R141
R142
C147
R139
R138
R272
C237
C159
C156
R273
C157
R271
C243
C240
R149
C162
FB103
R143
R151
C160
FB104
C242
C154
C197
R152
C146
C123
D105
R153
FB105
C193
IC113
C192
C164
R163
C308
C309
R333
R332
FB302
C312
C314
C313
C310
C348
C521
R346
R345
R334
R356
C328
R331
C330
C336
C327
R357
R341
R343
R367
FB303
R319
R320
R321
R354
R359
R371
C331
C337
R358
FB304
R377
C324
C333
C340
R369
R322
R335
C303
R325
R326
C302
R323
C334
R537
C318
C322
R532
R531
R370
C339
R375
R373
C335
R536
R349
R351
R350
R533
C304
C306
C305
FB301
R538
R374
R348
R352
R372
R376
R361
R360
R107
C153
C288
D104
C114
R116
R112
R120
C118
C137
C169
R114
C127
C129
R113
C117
C108
C107
C260
C261
C263
C104
C142
R118
TR102
C
E
B
R129
R115
R130
C128
C115
R117
C196
R132
C136
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C416
R424
IC410
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C427
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C487
C486
C411
R419
R420
IC409
C412
C403
R512
C404
R404
R402
R401
C499
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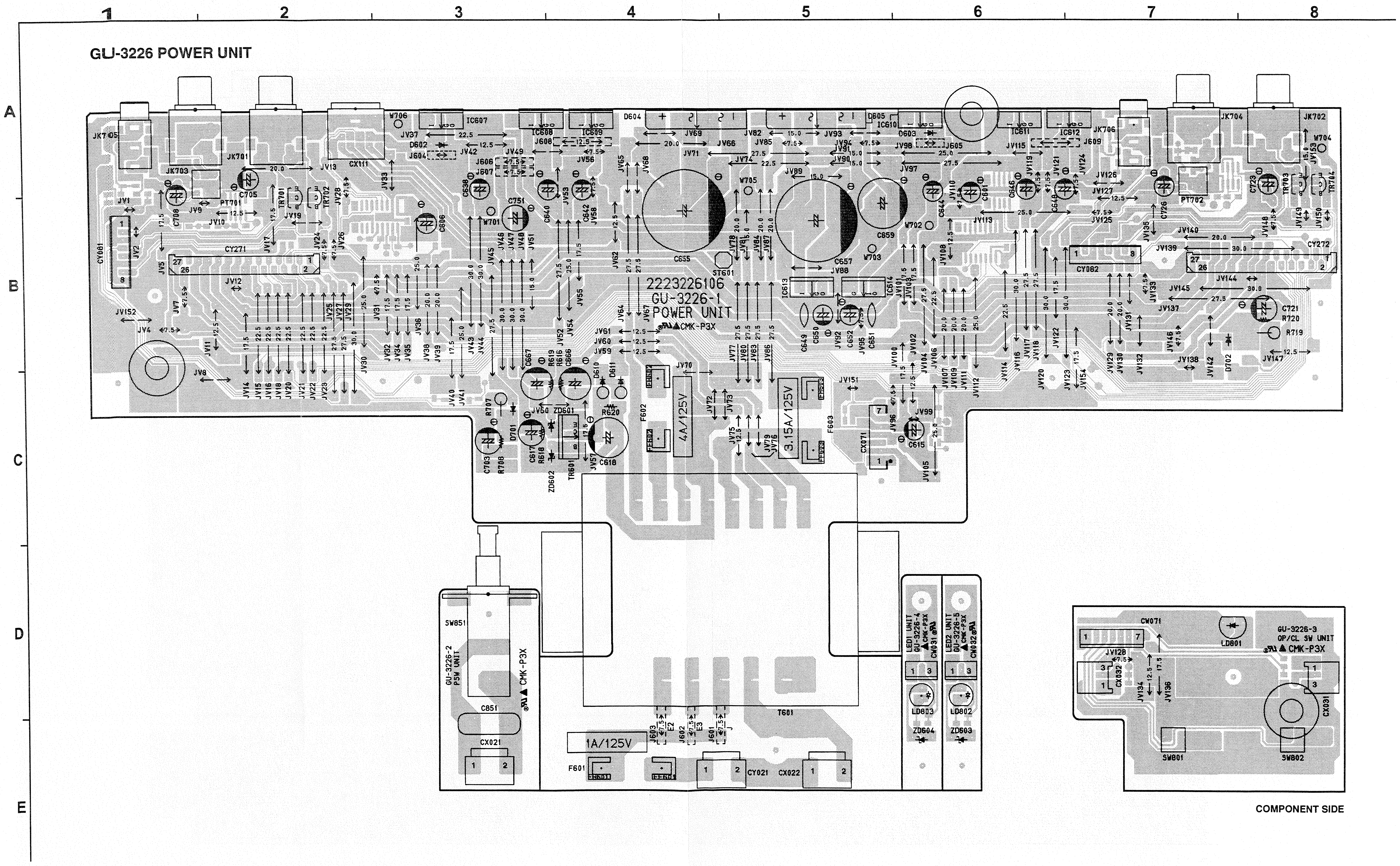
C447
C448
5
4
8
1

FOIL SIDE

GU-3226 POWER UNIT


1
2
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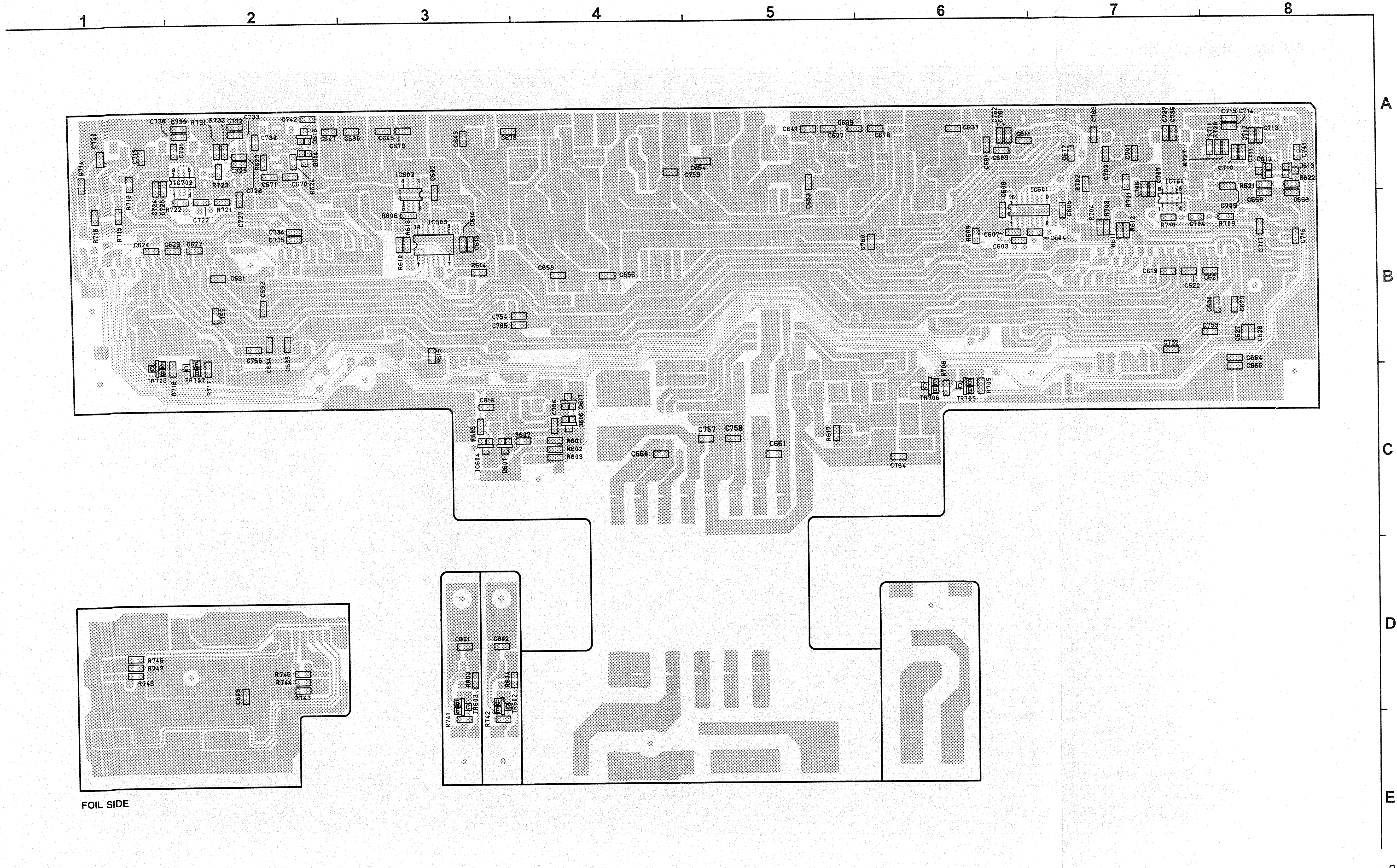
7
8
A
B
C
D
E
2223226106
GU-3226-1
POWER UNIT
CMK-P3X
4A/125V
3.15A/125V
1A/125V
F601
F602
F603
T601
IC607
IC608
IC609
IC610
IC611
IC612
IC613
IC614
JK701
JK702
JK703
JK704
JK705
JK706
CY081
CY082
CY271
CY272
C655
C657
C659
ST601
SW851
GU-3226-2
PSW UNIT
C851
CX021
CY021
CX022
LED1 UNIT
GU-3226-4
LED2 UNIT
GU-3226-5
LD803
LD802
ZD604
ZD603
CW071
LD801
GU-3226-3
OP/CL SW UNIT
CX032
CX031
SW801
SW802

COMPONENT SIDE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C732
C733
C742
C720
C719
R714
C731
IC702
R723
C729
R629
C730
D615
D614
C647
C680
C645
C679
C643
C678
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R722
C724
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R715
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IC603
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C635
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TR707
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R615
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R727
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D617
D616
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R601
R602
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C764
R746
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R748
R745
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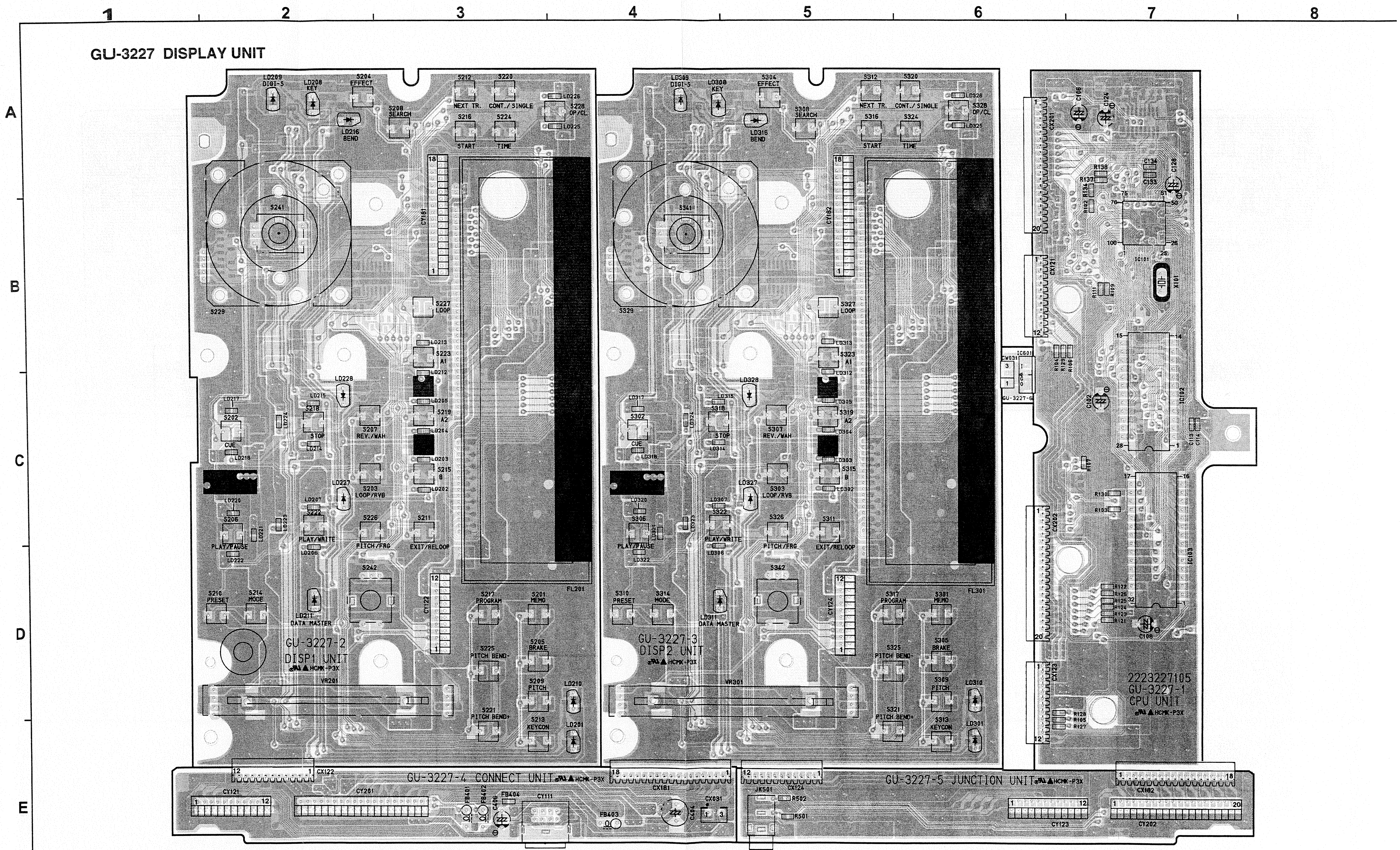
TR602
R741
R742

FOIL SIDE

GU-3227 DISPLAY UNIT


1
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4
5
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7
8
A
B
C
D
E
LD209 DIGI-S
LD208 KEY
S204 EFFECT
S212
S220
NEXT TR.
CONT./SINGLE
S208 SEARCH
LD216 BEND
S216
S224
START
TIME
LD226
S228 OP/CL
LD225
CY161
S241
S229
S227 LOOP
LD213
S223 A1
LD212
LD205
S219 A2
LD204
LD203
S215 B
LD202
LD228
LD215
S218 STOP
LD214
S207 REV./WAH
LD217
S202 CUE
LD218
LD224
LD227
S203 LOOP/RVB
LD220
S206 PLAY/PAUSE
LD222
LD221
LD223
LD207
S222 PLAY/WRITE
LD206
S226 PITCH/FRG
S211 EXIT/RELOOP
S242
FL201
S210 PRESET
S214 MODE
LD211 DATA MASTER
CY122
S217 PROGRAM
S201 MEMO
S225 PITCH BEND-
S205 BRAKE
S209 PITCH
LD210
S221 PITCH BEND+
S213 KEYCON
LD201
GU-3227-2 DISP1 UNIT
HCMK-P3X
VR201
LD309 DIGI-S
LD308 KEY
S304 EFFECT
S312
S320
S308 SEARCH
LD316 BEND
S316
S324
LD326
S328 OP/CL
LD325
CY162
S341
S329
S327 LOOP
LD313
S323 A1
LD312
LD305
S319 A2
LD304
LD303
S315 B
LD302
LD328
LD315
S318 STOP
LD314
S307 REV./WAH
LD317
S302 CUE
LD318
LD324
LD327
S303 LOOP/RVB
LD320
S306 PLAY/PAUSE
LD322
LD321
LD323
LD307
S322 PLAY/WRITE
LD306
S326 PITCH/FRG
S311 EXIT/RELOOP
S342
FL301
S310 PRESET
S314 MODE
LD311 DATA MASTER
CY124
S317 PROGRAM
S301 MEMO
S325 PITCH BEND-
S305 BRAKE
S309 PITCH
LD310
S321 PITCH BEND+
S313 KEYCON
LD301
GU-3227-3 DISP2 UNIT
HCMK-P3X
VR301
CX201
C108
C124
C134
C133
C128
R138
R137
R134
R102
IC101
X101
CX121
R111
R119
IC601
CW031
R104
R129
R106
GU-3227-6
IC102
C102
C113
C114
R107
R130
R103
CX202
IC103
R122
R120
R125
R124
R123
R121
C106
CX123
R128
R105
R127
2223227105
GU-3227-1
CPU UNIT
HCMK-P3X
CX122
GU-3227-4 CONNECT UNIT
HCMK-P3X
CY121
CY201
FB401
FB402
C406
FB404
CY111
CX161
FB403
C404
CX031
JK501
CX124
R502
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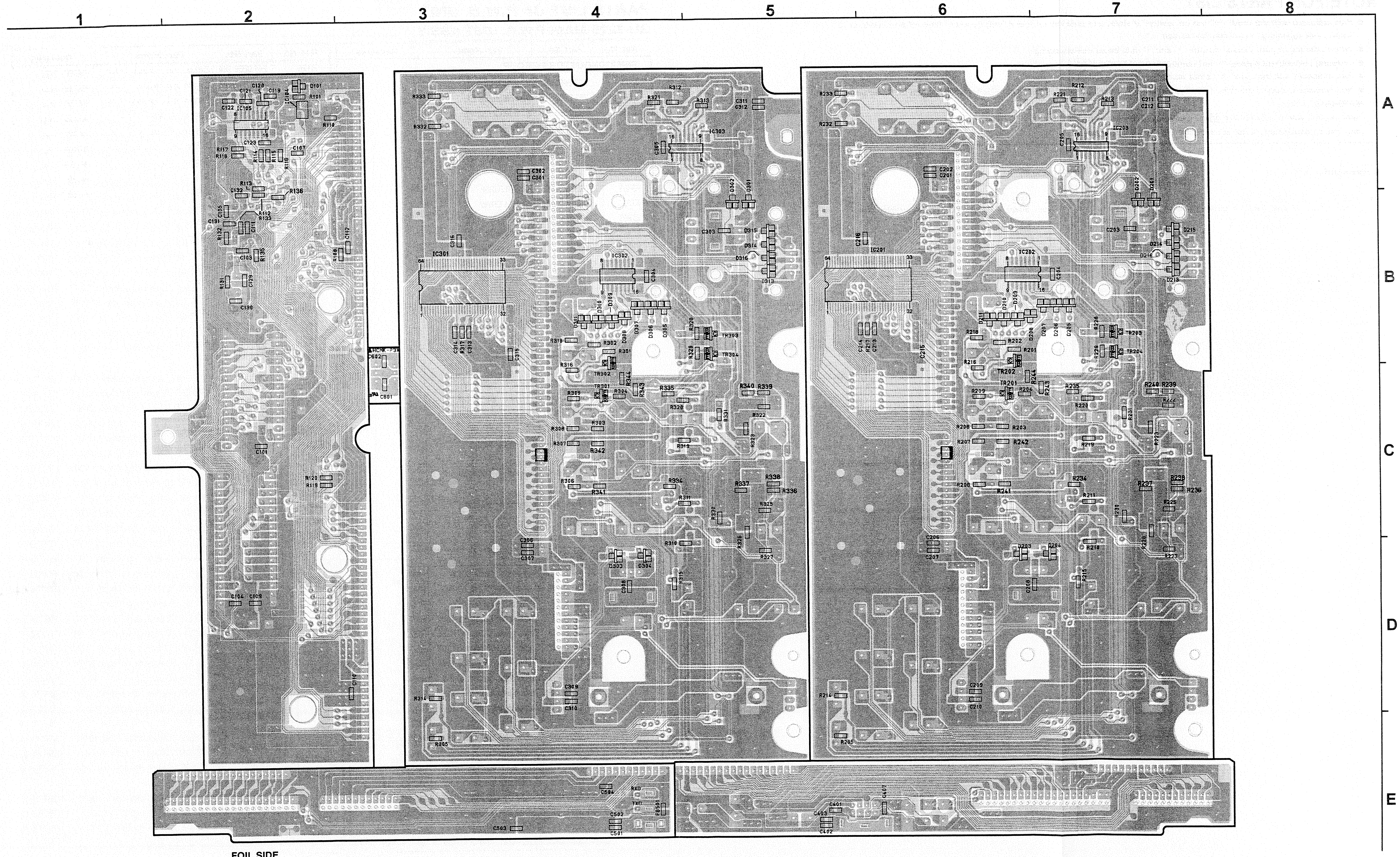
GU-3227-5 JUNCTION UNIT
HCMK-P3X
CX162
CY123
CY202

COMPONENT SIDE


1
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7
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A
B
C
D
E
IC105
IC301
IC302
IC303
IC201
IC202
IC203
TR301
TR302
TR303
TR304
TR201
TR202
TR203
TR204
R136
R333
R332
R312
R321
R313
R233
R232
R212
R221
R213
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C307
C206
C207
C101
C104
C109
C110
C120
C119
C121
C122
C123
C130
R113
R112
R133
R120
R119
C601
C602
C501
C502
C503
C504
C401
C402
C403
C407
RXD
TXD
FOIL SIDE

FOIL SIDE

NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.:	RN	14K	2E	182	G	FR
	Type	Shape and performance	Power	Resistance	Allowable error	Others

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

＊ Resistance

1 8 2 ⇒ 1800 ohm = 1.8 kohm
2 — Indicates number of zeros after effective number.
1 8 — 2-digit effective number.
- Units: ohm

1 R 2 ⇒ 1.2 ohm
2 — 1-digit effective number.
1 R — 2-digit effective number, decimal point indicated by R.
- Units: ohm

● Capacitors

Ex.:	CE	04W	1H	2R2	M	BP
	Type	Shape and performance	Dielectric strength	Capacity	Allowable error	Others

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For change and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80% −20%	U : UL part
CP : Oil	2A : 100V		C : CSA part
CM : Mica	2B : 125V	P : +100% −0%	W : UL-CSA type
CF : Metallized	2C : 160V		F : Lead wire forming
CH : Metallized	2D : 200V	C : ±0.25pF	
	2E : 250V	D : ±0.5pF	
	2H : 500V	= : Others	
	2J : 630V		

＊ Capacity (electrolyte only)

2 2 2 ⇒ 2200µF
2 — Indicates number of zeros after effective number.
2 2 — 2-digit effective number.
- Units: µF.

2 R 2 ⇒ 2.2µF
2 — 1-digit effective number.
2 R — 2-digit effective number, decimal point indicated by R.
- Units: µF.

＊ Capacity (except electrolyte)

2 2 2 ⇒ 2200pF=0.0022µF
2 —(More than 2)— Indicates number of zeros after effective number.
2 2 — 2-digit effective number.
- Units: µF.

2 2 1 ⇒ 220pF
1 —(0 or 1)— Indicates number of zeros after effective number.
2 2 — 2-digit effective number.
- Units: pF.

- When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT

GU-3225 MAIN P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 2461 902	IC AN8816SB-E1	
IC102	262 2462 901	IC AN8807SB-E1	
IC103	262 2368 005	IC MN662724RPE	
IC104	263 0994 908	IC BA6287F-E2	
IC201	262 2746 009	IC MN102LF61GAC	
IC301	262 2465 005	IC SM5902AF	
IC302	262 2701 905	IC 16M DRAM	
IC303	262 2651 903	IC BU2618FV (E2)	
IC305,306	262 1883 905	IC TC9246F	
IC307	262 2063 902	IC HD74AC04FP	
IC401,402	262 2290 018	IC MN19413A	
IC403~406	262 2701 905	IC 16M DRAM	
IC407,408	262 0707 901	IC TC4053BF	
IC409,410	263 0615 902	IC BA15218F	
IC501	263 0615 902	IC BA15218F	
TR101	272 0025 907	Transistor 2SB562 (C)	
TR102	269 0082 902	Transistor DTC114EK	
TR103	273 0384 900	Transistor 2SC2412K (S)	
D104,105	276 0559 909	Diode DAP202K	
ZD101	276 0462 928	Zener diode HZS6B-3	
ZD301	276 0450 901	Zener diode HZS2B-1	
RESISTORS GROUP			
R101~106	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R107	247 0002 966	Carbon chip 10ohm 1/10W	RM73B--100J
R108,109	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R111	247 0008 902	Carbon chip 1.8kohm 1/10W	RM73B--182J
R112	247 0013 968	Carbon chip 390kohm 1/10W	RM73B--394J
R113	247 0013 942	Carbon chip 330kohm 1/10W	RM73B--334J
R114,115	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R116	247 0010 987	Carbon chip 27kohm 1/10W	RM73B--273J
R117	247 0011 902	Carbon chip 33kohm 1/10W	RM73B--333J
R118	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R119	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R120	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R121	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R122	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R123	247 0012 901	Carbon chip 82kohm 1/10W	RM73B--823J
R124	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R125	247 0011 986	Carbon chip 68kohm 1/10W	RM73B--683J
R126	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R127	247 0011 960	Carbon chip 56kohm 1/10W	RM73B--563J
R128	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R130	247 0011 928	Carbon chip 39kohm 1/10W	RM73B--393J
R131	247 0013 900	Carbon chip 220kohm 1/10W	RM73B--224J
R132	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R133	247 0010 945	Carbon chip 18kohm 1/10W	RM73B--183J
R134	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R135	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R136	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R137	247 0011 986	Carbon chip 68kohm 1/10W	RM73B--683J
R138	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R139	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R141	247 0005 918	Carbon chip 110ohm 1/10W	RM73B--111J
R142	247 0007 903	Carbon chip 680ohm 1/10W	RM73B--681J
R143	247 0011 902	Carbon chip 33kohm 1/10W	RM73B--333J
R146~148	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R152	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R153~155	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R156	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R157	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R158	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R201	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R202~208	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R209~221	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R222,223	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R224	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R225	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R226	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R227	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R228	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R229	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R230	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R231	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R232	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R233	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R234	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R235,236	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R237	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R238,239	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R240~242	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R243	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R244	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R245~256	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R257	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R263	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R271	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R272,273	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R274,275	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R301	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R302~311	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R312	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J

Ref. No.	Part No.	Part Name	Remarks
R313~316	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R317	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R318	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R319~322	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R323	247 0003 978	Carbon chip 30ohm 1/10W	RM73B--300J
R324	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R325,326	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R327~330	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R331	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R332,333	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R334	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R335	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R337,338	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R343	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R345,346	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R348	247 0007 987	Carbon chip 1.5kohm 1/10W	RM73B--152J
R349	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R350	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R351	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R355	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R356	247 0009 998	Carbon chip 11kohm 1/10W	RM73B--113J
R357	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R358	247 0013 939	Carbon chip 300kohm 1/10W	RM73B--304J
R359	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R360,361	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R363	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R367	247 0012 914	Carbon Chip 91kohm 1/10W	RM73B--913J
R369	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R370	247 0013 939	Carbon chip 300kohm 1/10W	RM73B--304J
R373	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R374	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R378	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R401,402	247 0010 990	Carbon chip 30kohm 1/10W	RM73B--303J
R403~406	247 0009 969	Carbon chip 8.2kohm 1/10W	RM73B--822J
R407~410	247 0008 902	Carbon chip 1.8kohm 1/10W	RM73B--182J
R411~414	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R415~419	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R421,422	247 0010 990	Carbon chip 30kohm 1/10W	RM73B--303J
R423~426	247 0009 969	Carbon chip 8.2kohm 1/10W	RM73B--822J
R427~430	247 0008 902	Carbon chip 1.8kohm 1/10W	RM73B--182J
R431~434	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R435~439	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R441,442	247 0005 947	Carbon chip 150ohm 1/10W	RM73B--151J
R443,444	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R450	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R451	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R452	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R453	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R454	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R455~475	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R476	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J

Ref. No.	Part No.	Part Name	Remarks
R484,485	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R486	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R488~509	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R510	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R511,512	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R513,514	247 0009 914	Carbon chip 5.1kohm 1/10W	RM73B--512J
R515~518	247 0009 972	Carbon chip 9.1kohm 1/10W	RM73B--912J
R519,520	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R521,522	247 0010 974	Carbon chip 24kohm 1/10W	RM73B--243J
R523,524	247 0010 990	Carbon chip 30kohm 1/10W	RM73B--303J
R525,526	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R531	247 0012 985	Carbon chip 180kohm 1/10W	RM73B--184J
R532	247 0008 931	Carbon chip 2.4kohm 1/10W	RM73B--242J
R533	247 0009 914	Carbon chip 5.1kohm 1/10W	RM73B--512J
R534	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R536~538	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
CAPACITORS GROUP			
C103	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C104	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C105	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C106	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C109	257 3006 911	Metallized chip 0.1µF/16V	CF73=1C104J (ECHU)
C110	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C111	254 4305 968	Electrolytic 1µF/50V	CE04W1H010M (SRE)
C112	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C113	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C114	257 3010 923	Metallized chip 150pF/50V	CF73=1H151J (ECHU)
C115	257 3010 952	Metallized chip 270pF/50V	CF73=1H271J (ECHU)
C116,117	257 3006 911	Metallized chip 0.1µF/16V	CF73=1C104J (ECHU)
C118	257 0001 948	Ceramic chip 2.0 pF/50V	CC73SL1H2R0C
C119	254 4305 968	Electrolytic 1µF/50V	CE04W1H010M (SRE)
C120	257 3010 907	Metallized chip 100pF/50V	CF73=1H101J (ECHU)
C121	257 3014 990	Metallized chip 0.027µF/16V	CF73=1C273J (ECHU)
C122	257 3011 948	Metallized chip 2200pF/50V	CF73=1H222J (ECHU)
C123	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C124	256 1059 912	Metallized 0.22µF/50V	CF93A1H224J (JL)
C125	255 1265 923	Mylar film 8200pF/50V	CQ93M1H822J (B)
C127	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C128	257 3011 948	Metallized chip 2200pF/50V	CF73=1H222J (ECHU)
C130	257 3006 911	Metallized chip 0.1µF/16V	CF73=1C104J (ECHU)
C131	257 3015 928	Metallized chip 0.047µF/16V	CF73=1C473J (ECHU)
C132	257 3014 929	Metallized chip 4700pF/16V	CF73=1C472J (ECHU)
C133	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C134	254 4213 940	Electrolytic 220µF/6.3V	CE04W0J221M (SRA)
C135	255 1264 982	Mylar film 4700pF/50V	CQ93M1H472J (B)
C136	257 3010 949	Metallized chip 220pF/50V	CF73=1H221J (ECHU)
C137	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C138,139	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C140	255 1264 924	Mylar film 1500pF/50V	CQ93M1H152J (B)
C141	253 9030 976	Ceramic 0.015µF/25V	CK45=1E153K

Ref. No.	Part No.	Part Name	Remarks
C142	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C143	257 3010 994	Metallized chip 560pF/50V	CF73=1H561J (ECHU)
C144	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C145	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C146	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C148,149	255 1265 978	Mylar film 0.022µF/50V	CQ93M1H223J (B)
C150	256 1058 971	Metallized 0.1µF/50V	CF93A1H104J (JL)
C151	256 1059 938	Metallized 0.33µF/50V	CF93A1H334J (JL)
C152	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C153,154	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C156,157	257 0001 977	Ceramic chip 5.0 pF/50V	CC73SL1H5R0C
C158	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C159	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C162	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C163	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C164	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C165	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C166	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C167	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C168	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C169	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C177	257 0002 947	Ceramic chip 12pF/50V	CC73SL1H120J
C192	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C193	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C194	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C195	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C196~198	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C199	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C201	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C202	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C203	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C204,205	257 0002 963	Ceramic chip 15pF/50V	CC73SL1H150J
C206	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C207	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C208	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C209	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C225	254 3068 918	Electrolytic 2.2µF/50V	CE04D1H2R2MBP (SRA)
C237	257 3010 949	Metallized chip 220pF/50V	CF73=1H221J (ECHU)
C240	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C242,243	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C244	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C245	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C251~253	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C254	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C255,256	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C257	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C258	254 4533 950	Electrolytic 470µF/6.3V	CE04W0J471M
C259,260	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C261	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C262	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C263~266	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z

Ref. No.	Part No.	Part Name	Remarks
C267,268	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C282	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C283	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C289	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C290	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C291	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C292	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C293	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C294	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C301	254 4300 989	Electrolytic 330µF/6.3V	CE04W0J331M (SRE)
C302	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C303	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C304	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C307	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C308	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C309	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C310,311	257 0002 947	Ceramic chip 12pF/50V	CC73SL1H120J
C312	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C313	254 4300 989	Electrolytic 330µF/6.3V	CE04W0J331M (SRE)
C314	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C315	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C317	254 4300 989	Electrolytic 330µF/6.3V	CE04W0J331M (SRE)
C318	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C322	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C323	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C324	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C326	254 4305 955	Electrolytic 0.68µF/50V	CE04W1HR68M (SRE)
C328	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C329	254 4300 989	Electrolytic 330µF/6.3V	CE04W0J331M (SRE)
C330	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C331	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C333	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C334	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C335	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C336,337	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C338	254 4305 955	Electrolytic 0.68µF/50V	CE04W1HR68M (SRE)
C340	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C344	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C345	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C346	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C347	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C348	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C401,402	254 4299 906	Electrolytic 10µF/16V	CE04W1C100M (SRE)
C403~406	257 0005 944	Ceramic chip 220pF/50V	CC73SL1H221J
C407,408	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C409,410	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C411,412	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C413,414	254 4299 906	Electrolytic 10µF/16V	CE04W1C100M (SRE)
C415~418	257 0005 944	Ceramic chip 220pF/50V	CC73SL1H221J
C419,420	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J

Ref. No.	Part No.	Part Name	Remarks
C421,422	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C423,424	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C425,426	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C427,428	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C429,430	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C431	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C432,433	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C434	254 4305 968	Electrolytic 1µF/50V	CE04W1H010M (SRE)
C435	254 4299 919	Electrolytic 22µF/16V	CE04W1C220M (SRE)
C436	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C437	254 4299 919	Electrolytic 22µF/16V	CE04W1C220M (SRE)
C440	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C441	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C442	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C443,444	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C445,446	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C447	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C448	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C449	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C450	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C451	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C452	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C453	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C454	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C455	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C456	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C457,458	254 4299 919	Electrolytic 22µF/16V	CE04W1C220M (SRE)
C459	254 4305 968	Electrolytic 1µF/50V	CE04W1H010M (SRE)
C460,461	254 4299 919	Electrolytic 22µF/16V	CE04W1C220M (SRE)
C462	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C463	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C464	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C465,466	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C467,468	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C469	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C470	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C471	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C472	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C473	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C474	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C475	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C476	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C477	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C478	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C479	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C480	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C481	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C482	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C483,484	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C485	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C486	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C487,488	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z

Ref. No.	Part No.	Part Name	Remarks
C489	254 4299 964	Electrolytic 47µF/16V	CE04W1C470M (SRE)
C490	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C491,492	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C493~498	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C499,500	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C503,504	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C505,506	254 4299 906	Electrolytic 10µF/16V	CE04W1C100M (SRE)
C507,508	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C509,510	254 4302 974	Electrolytic 100µF/10V	CE04W1A101M (SRE)
C511	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C512,513	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C514,515	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C516	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C521	257 0006 901	Ceramic chip 390pF/50V	CC73SL1H391J
C522	254 4300 989	Electrolytic 330µF/6.3V	CE04W0J331M (SRE)

OTHER PARTS GROUP				Q'ty
AS201	205 0488 036	32P IC socket		1
CX051	205 0343 058	5P connector base(KR-PH)		1
CX052	205 0321 054	5P connector base (RED)		1
CX061	205 0321 067	6P connector base (RED)		1
CX081	205 0395 080	8P connector base (RED) L		1
CX083	205 0343 087	8P connector base (KR-PH)		1
CX271	205 1138 000	27P FFC connector base(SIDE)		1
FB101	235 0049 900	Beads inductor		1
FB102	235 0106 908	EMI filter (21A05)		1
FB104,105	235 0106 908	EMI filter (21A05)		2
FB125	235 0106 908	EMI filter (21A05)		1
FB126	235 0049 900	Beads inductor		1
FB201	235 0049 900	Beads inductor		1
FB251~260	235 0106 908	EMI filter (21A05)		10
FB261,262	235 0086 905	EMI filter (101)		2
FB301	235 0106 908	EMI filter (21A05)		1
FB303,304	235 0106 908	EMI filter (21A05)		2
FB501,502	235 0049 900	Beads inductor		2
FB503	235 0106 908	EMI filter (21A05)		1
JP101	205 0339 004	JM jumper connector		1
L101	235 0060 950	Inductor 10µH		1
L401,402	235 0107 949	LEM4532T101M		2
TP101	205 0343 061	6P connector base (KR-PH)		1
TP102	205 0343 032	3P connector base (KR-PH)		1
X101	399 0594 005	Crystal 30MHz		1
X201	399 0352 904	Ceramic resonator	CSA20.0MXZ040-TF01	1
X301	399 0595 004	Crystal 8.4672MHz		1
	205 0341 018	3P RE header	for JP101	1

GU-3226 POWER P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC601	262 2090 904	IC MAX202CSE	
IC602	262 1711 909	IC X24C00S	
IC603	262 1930 900	IC TC74AC08AF	
IC604	262 1647 905	IC MN1382-S(TX)	
IC607	263 1056 007	IC UPC2406AHF	
IC608,609	263 1043 007	IC UPC2405AHF	
IC610	263 1056 007	IC UPC2406AHF	
IC611~613	263 1043 007	IC UPC2405AHF	
IC614	263 0554 005	IC NJM7905FA	
IC701,702	262 1953 903	IC TC7WU04F	
TR601	272 0083 004	Transistor 2SB1185 (E/F)	
TR701~704	274 0160 907	Transistor 2SD2144STPU	
TR705	269 0083 901	Transistor DTA114EK	
TR706	269 0082 902	Transistor DTC114EK	
TR707	269 0083 901	Transistor DTA114EK	
TR708	269 0082 902	Transistor DTC114EK	
D601	276 0559 909	Diode DAP202K	
D602,603	276 0432 903	Diode 1SS270A	
D604,605	276 0623 000	Diode D3SBA20	
D610,611	276 0550 908	Diode 1SR139-200	
D612	276 0438 949	Diode MA151WK	
D613	276 0438 907	Diode MA151WA	
D614	276 0438 949	Diode MA151WK	
D615	276 0438 907	Diode MA151WA	
D616	276 0438 949	Diode MA151WK	
D617	276 0438 907	Diode MA151WA	
D701,702	276 0432 903	Diode 1SS270A	
ZD601	276 0643 967	Zener diode MTZJ4.3A	
ZD602	276 0646 906	Zener diode MTZJ39E	
LD801	393 9543 907	LED SLR-325VC	Red
LD802,803	393 9582 900	LED LNX901CFBDA	Blue
RESISTORS GROUP			
R601,602	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R603	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R606	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R607	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R608	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R609~615	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R617	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R621~624	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R701,702	247 0007 903	Carbon chip 680ohm 1/10W	RM73B--681J
R703,704	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R705	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R706	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R707	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS (S)
R709	247 0007 987	Carbon chip 1.5kohm 1/10W	RM73B--152J
R710	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R711	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R713,714	247 0007 903	Carbon chip 680ohm 1/10W	RM73B--681J
R715,716	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R717	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R718	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R719	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS (S)
R721	247 0007 987	Carbon chip 1.5kohm 1/10W	RM73B--152J
R722	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R723	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R727,728	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R731,732	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R741,742	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R744	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R747	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R803,804	247 0006 904	Carbon chip 270ohm 1/10W	RM73B--271J
CAPACITORS GROUP			
C601	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C602~605	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C606	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C607,608	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C611	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C613	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C614	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C615	254 4538 939	Electrolytic 47µF/16V	CE04W1C470M (SMG/RE3)
C616	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C617	254 4535 929	Electrolytic 47µF/63V	CE04W1J470M (SMG/RE3)
C618	254 4540 707	Electrolytic 330µF/63V	CE04W1J331M (SMG/RE3)
C619~624	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C626	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C627	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C629~632	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C634	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C635	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C637	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C638	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C639	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C640	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C641	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C642	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C643	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C644	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C645	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C646	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C647	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C648	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)

Ref. No.	Part No.	Part Name	Remarks
C649	253 9039 906	Ceramic 0.1µF/25V	CK45=1E104Z
C650	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C651	253 9039 906	Ceramic 0.1µF/25V	CK45=1E104Z
C652	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C653,654	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C655	254 4565 708	Electrolytic 12000µF/16V	CE04W1C123M (SMG)
C656	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C657	254 4442 711	Electrolytic 10000µF/16V	CE04W1C103M (SMG)
C658	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C659	254 4539 718	Electrolytic 2200µF/16V	CE04W1C222M (SMG/RE3)
C664	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C665	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C668~671	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C676~681	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C701,702	257 3011 919	Metallized chip 1000pF/50V	CF73=1H102J (ECHU)
C703	254 4538 955	Electrolytic 220µF/16V	CE04W1C221M (SMG/RE3)
C704	257 3011 919	Metallized chip 1000pF/50V	CF73=1H102J (ECHU)
C705	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C706	257 0012 908	Ceramic chip 1000pF/50V	CK73F1H102Z
C707	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C708	254 4254 925	Electrolytic 33µF/16V	CE04W1C330M
C709	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C710	257 0012 908	Ceramic chip 1000pF/50V	CK73F1H102Z
C711,712	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C713	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C715	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C716,717	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C719,720	257 3011 919	Metallized chip 1000pF/50V	CF73=1H102J (ECHU)
C721	254 4538 955	Electrolytic 220µF/16V	CE04W1C221M (SMG/RE3)
C722	257 3011 919	Metallized chip 1000pF/50V	CF73=1H102J (ECHU)
C723	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C724	257 0012 908	Ceramic chip 1000pF/50V	CK73F1H102Z
C725	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C726	254 4254 925	Electrolytic 33µF/16V	CE04W1C330M
C727	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C728	257 0012 908	Ceramic chip 1000pF/50V	CK73F1H102Z
C729,730	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C731	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C733	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C734~736	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C737	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C738	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C739	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C741,742	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C751	254 4538 955	Electrolytic 220µF/16V	CE04W1C221M (SMG/RE3)
C752~756	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C759~761	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C762	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C763~766	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C801~803	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z

Ref. No.	Part No.	Part Name	Remarks
⚠C851	253 8022 707	Ceramic 0.01 µF/250V (AC)	CK45F2EAC103M

OTHER PARTS GROUP				Q'ty
CW031,032	203 4379 022	3P KR-DS connector cord		2
CW071	204 2309 042	7P KR-DS connector cord		1
CX021,022	205 0581 001	2P VH connector base		2
CX031,032	205 0355 033	3P KR connector base (L)		2
CX071	205 0343 074	7P connector base (KR-PH)		1
CX111	205 1135 003	8P MD connector base (F-S)		1
CY021	205 0581 056	2P VH connector base		1
CY081,082	205 0321 083	8P connector base (RED)		2
CY271,272	205 0880 016	27P FFC connector base		2
FF601~603	202 0040 909	Fuse clip		3
FH601~603	202 0040 909	Fuse clip		3
JK701,702	204 8553 009	2P pin jack (FG-ANA)		2
JK703,704	204 8406 020	1P pin jack		2
JK705,706	204 8421 005	Mini jack		2
PT701,702	231 8063 009	Pulse trans.		2
SW801,802	212 5604 907	Tact switch		2
⚠SW851	212 1176 015	Power switch (TV-5)		1

GU-3227 DISPLAY P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 2463 007	IC MN102L2503	
IC102	262 2103 008	IC CAT28C64BP-15	
IC103	GEN 4696	SYSTEM ROM SUB ASS'Y	CAT28 F010P 09 (P)
IC104	262 2452 908	IC MN1382-R (TX)	
IC105	262 2090 904	IC MAX202CSE	
IC201	262 1954 902	IC M66004FP	
IC202	262 2251 905	IC TC74AC138F (EL)	
IC203	262 2745 903	IC BU2090F (E2)	
IC301	262 1954 902	IC M66004FP	
IC302	262 2251 905	IC TC74AC138F (EL)	
IC303	262 2745 903	IC BU2090F (E2)	
IC601	263 1043 007	IC UPC2405AHF	
TR201~204	269 0048 904	Transistor DTC143EK	
TR301~304	269 0048 904	Transistor DTC143EK	
D101	276 0438 910	Diode MA151A	
D201~211	276 0438 910	Diode MA151A	
D213~216	276 0438 910	Diode MA151A	
D301~311	276 0438 910	Diode MA151A	
D313~316	276 0438 910	Diode MA151A	
FL201	393 8046 007	FLD (CM1941M)	
FL301	393 8046 007	FLD (CM1941M)	
LD201	393 9543 923	LED SLR-325DC	Orange
LD202,203	393 9571 911	LED TLOU1002	Orange
LD204,205	393 9571 908	LED TLGU1002	Green
LD208	393 9543 923	LED SLR-325DC	Orange
LD209	393 9543 907	LED SLR-325VC	Red
LD210	393 9543 910	LED SLR-325MC	Green
LD211	393 9543 923	LED SLR-325DC	Orange
LD212,213	393 9571 908	LED TLGU1002	Green
LD216	393 9543 910	LED SLR-325MC	Green
LD217,218	393 9570 909	LED TLRA1002	Red
LD220~222	393 9571 908	LED TLGU1002	Green
LD225,226	393 9571 908	LED TLGU1002	Green
LD227	393 9543 910	LED SLR-325MC	Green
LD228	393 9543 907	LED SLR-325VC	Red
LD301	393 9543 923	LED SLR-325DC	Orange
LD302,303	393 9571 911	LED TLOU1002	Orange
LD304,305	393 9571 908	LED TLGU1002	Green
LD308	393 9543 923	LED SLR-325DC	Orange

Ref. No.	Part No.	Part Name	Remarks
LD309	393 9543 907	LED SLR-325VC	Red
LD310	393 9543 910	LED SLR-325MC	Green
LD311	393 9543 923	LED SLR-325DC	Orange
LD312,313	393 9571 908	LED TLGU1002	Green
LD316	393 9543 910	LED SLR-325MC	Green
LD317,318	393 9570 909	LED TLRA1002	Red
LD320~322	393 9571 908	LED TLGU1002	Green
LD325,326	393 9571 908	LED TLGU1002	Green
LD327	393 9543 910	LED SLR-325MC	Green
LD328	393 9543 907	LED SLR-325VC	Red
RESISTORS GROUP			
R101	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R102~111	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R112,113	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R114~130	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R131	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R132~134	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R135~138	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R201~204	247 0007 929	Carbon chip 820ohm 1/10W	RM73B--821J
R205	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R206,207	247 0005 950	Carbon chip 160ohm 1/10W	RM73B--161J
R208,209	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R212	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R213	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R214,215	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R216	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R217	247 0010 987	Carbon chip 27kohm 1/10W	RM73B--273J
R218	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R221	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R222,223	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R225~227	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R232,233	247 0007 932	Carbon chip 910ohm 1/10W	RM73B--911J
R234	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R235	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R241,242	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R243,244	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R301~304	247 0007 929	Carbon chip 820ohm 1/10W	RM73B--821J
R305	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R306,307	247 0005 950	Carbon chip 160ohm 1/10W	RM73B--161J
R308,309	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R312	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R313	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R314,315	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R316	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R317	247 0010 987	Carbon chip 27kohm 1/10W	RM73B--273J
R318	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R321	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R322,323	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R325~327	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J

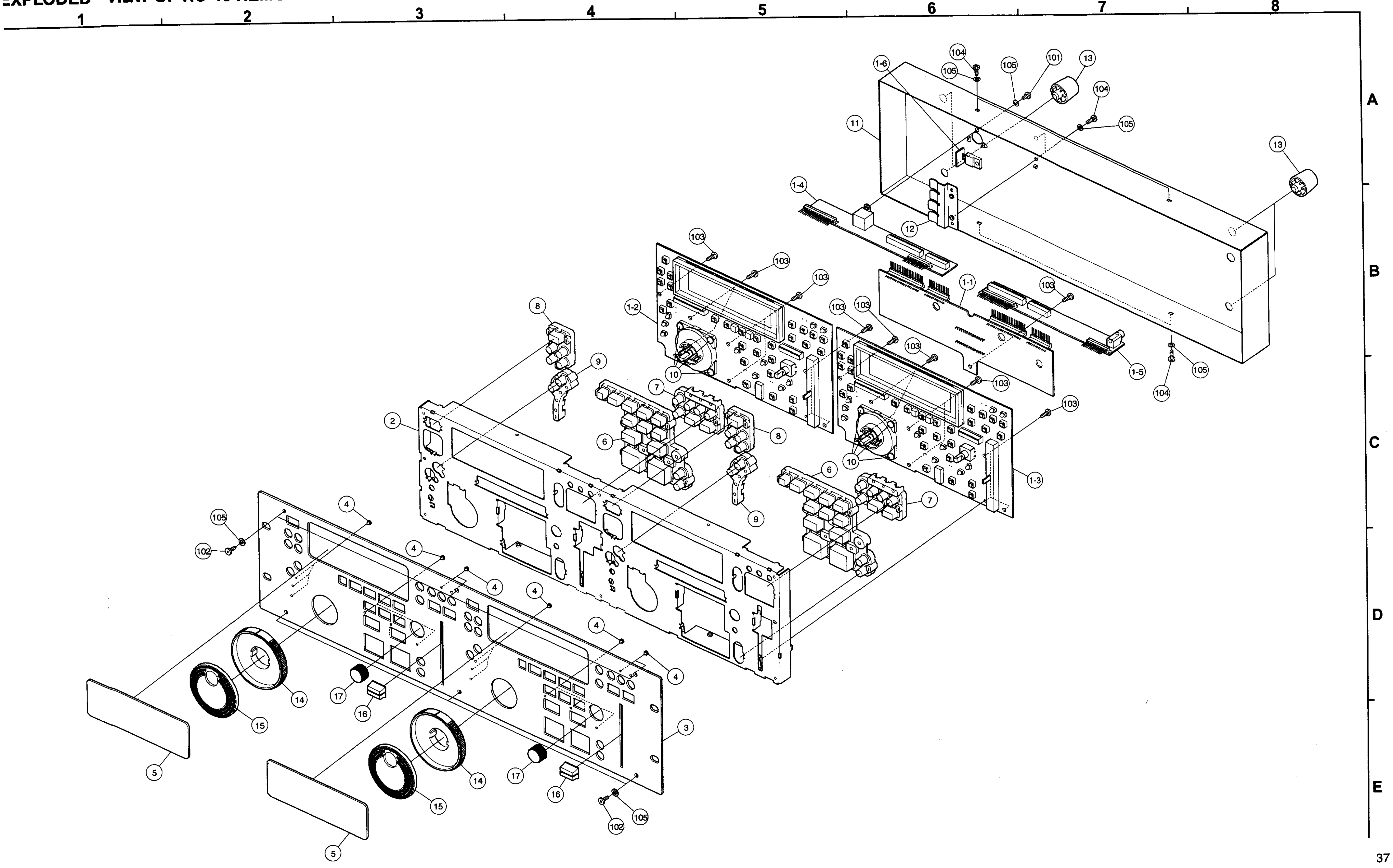
Ref. No.	Part No.	Part Name	Remarks
R332,333	247 0007 932	Carbon chip 910ohm 1/10W	RM73B--911J
R334	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R335	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R341,342	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R343,344	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R501,502	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
VR201	211 0849 007	Slide volume (C)	
VR301	211 0849 007	Slide volume (C)	
CAPACITORS GROUP			
C101	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C102	254 4538 939	Electrolytic 47µF/16V	CE04W1C470M (SMG/RE3)
C103,104	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C105	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C106	254 4538 939	Electrolytic 47µF/16V	CE04W1C470M (SMG/RE3)
C107	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C108	254 4538 939	Electrolytic 47µF/16V	CE04W1C470M (SMG/RE3)
C109	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C110~113	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C114	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C119~123	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C124	254 4538 939	Electrolytic 47µF/16V	CE04W1C470M (SMG/RE3)
C128	254 4538 942	Electrolytic 100µF/16V	CE04W1C101M (SMG/RE3)
C129,130	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C131~134	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C201,202	257 0013 907	Ceramic chip 0.047µF/50V	CK73F1H473Z
C203~205	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C206,207	257 0013 907	Ceramic chip 0.047µF/50V	CK73F1H473Z
C208~211	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C212	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C213	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C214	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C215	257 0013 907	Ceramic chip 0.047µF/50V	CK73F1H473Z
C216	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C301,302	257 0013 907	Ceramic chip 0.047µF/50V	CK73F1H473Z
C303~305	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C306,307	257 0013 907	Ceramic chip 0.047µF/50V	CK73F1H473Z
C308~311	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C312	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C313	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C314	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C315	257 0013 907	Ceramic chip 0.047µF/50V	CK73F1H473Z
C316	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C402	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C403	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C404	254 3056 962	Electrolytic 22µF/50V	CE04D1H220MBP
C406	254 4538 942	Electrolytic 100µF/16V	CE04W1C101M (SMG/RE3)

Ref. No.	Part No.	Part Name	Remarks	
C407	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z	
C601,602	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z	
OTHER PARTS GROUP				**Q'ty**
AS103	205 0488 036	32P IC socket		1
CW031	203 5012 061	3P SAN-PH connector cord		1
CX031	205 0343 032	3P connector base(KR-PH)		1
CX121~124	205 0850 059	12P connector base (BTMK-P)		4
CX181,182	205 0850 033	18P connector base (BTMK-P)		2
CX201,202	205 0850 046	20P connector base (BTMK-P)		2
CY111	205 1135 003	8P MD connector base (F-S)		1
CY121~124	205 0849 057	12P connector base (BTMK-S)		4
CY181,182	205 0849 031	18P connector base (BTMK-S)		2
CY201,202	205 0849 044	20P connector base (BTMK-S)		2
FB401~403	235 0049 900	Beads inductor		3
FB501	235 0106 908	EMI filter (21A05)		1
JK501	204 8421 005	Mini jack		1
S201~228	212 5604 907	Tact switch		28
S229	212 0427 008	Shuttle		1
S241	212 0433 005	Rotary encorder		1
S242	212 0410 002	Rotary encorder-JOG		1
S301~328	212 5604 907	Tact switch		28
S329	212 0427 008	Shuttle		1
S341	212 0433 005	Rotary encorder		1
S342	212 0410 002	Rotary encorder-JOG		1
X101	399 0219 021	Crystal 12.288MHz		1
	479 0010 005	Push rivet		4
	513 8013 003	P-ROM seal		1
	461 0984 046	FL spacer		2

PARTS LIST OF RC-46 REMOTE CONTROL UNIT

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	GU-3227	Display P.W.B. unit Ass'y		1
1-1		CPU unit		
1-2		Display1 unit		
1-3		Display2 unit		
1-4		Connect unit		
1-5		Junction unit		
1-6		Regurator unit		
2	441 1920 005	RC front sub panel		1
3	144 2684 106	RC front panel		1
4	143 1072 004	Lens		16
5	146 2144 008	Window		2
6	119 0101 106	Rubber key (PLAY/PAUSE)		2
7	119 0102 008	Rubber key (PITCH BEND)		2
8	119 0103 007	Rubber key (OPEN/CLOSE)		2
9	119 0104 006	Rubber key (JOG MODE)		2
10	479 0010 005	Push rivet		8
11	105 1325 102	Cover		1
12	412 9371 001	Spring plate		1
13	104 0270 006	Foot		4
14	112 0843 007	Shuttle ring		2
15	112 0852 001	Jog dial Ass'y		2
16	113 1840 109	Slide knob		2
17	112 0820 017	Knob (Maru)		2
★ 19	513 3349 002	Caution label		1
SCREWS & NUTS				
101	471 3303 029	Screw 3×6 CBS-B		1
102	471 9050 020	Screw 3×6 FHHS MFZNII-B		6
103	473 7002 005	Screw 3×6 CBTS (S)-Z		17
104	473 7002 021	Screw 3×8 CBTS (S)-B		6
105	475 1178 009	Washer 3W-B		13

EXPLODED VIEW OF RC-46 REMOTE CONTROL UNIT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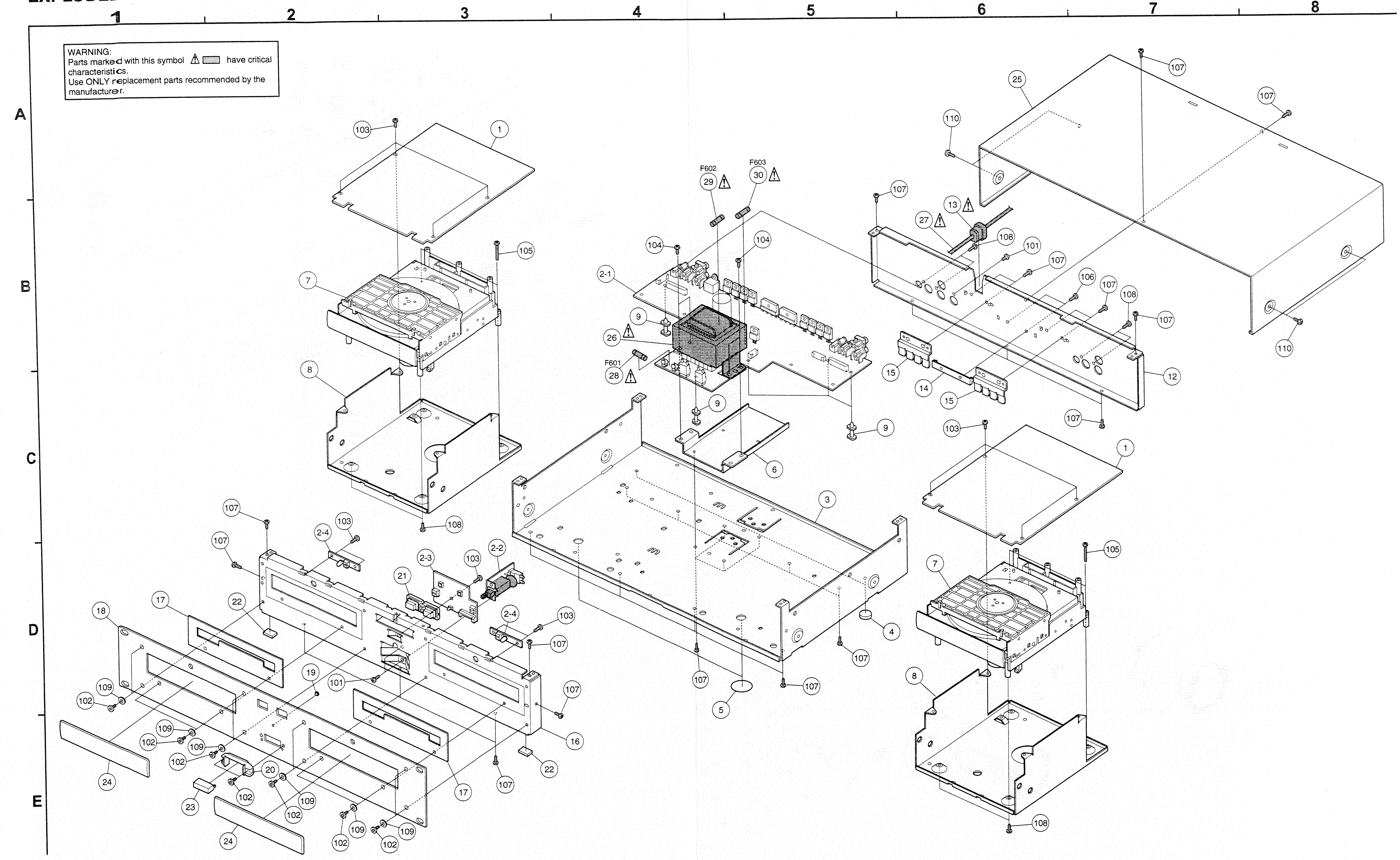
EXPLODED VIEW OF CHASSIS AND CABINET

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.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PARTS LIST OF EXPLODED VIEW

Note: The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A./Canada model
EK: U.K. model
E2: Europe model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	GU-3225	Main P.W.B. unit Ass'y		2
2	GU-3226	Power P.W.B. unit Ass'y		1
2-1		Power unit		
2-2		P. SW. unit		
2-3		OP/CL SW. unit		
2-4		LED unit		
3	411 1923 001	Chassis		1
4	461 0706 127	Foot sheet		2
5	513 3175 001	Blind label		2
6	412 4343 102	Trans. bracket		1
7	337 0059 102	CD mecha. unit (CD93F8)		2
8	412 4560 008	Mecha. bracket		2
9	412 2814 086	Card spacer (L=14.8)		5
12	105 1324 200	Back panel		1
⚠ 13	445 0084 009	Cord bush	for E3	1
⚠ 13	445 0056 008	Cord bush	for E2/EK	1
14	412 4580 004	Diode bracket		1
15	412 9371 001	Spring plate		2
16	441 1919 003	Front sub panel		1
17	415 0831 002	Blind sheet		2
18	144 2683 000	Front panel		1
19	143 1072 004	Lens		1
20	146 1661 016	Power SW. protector		1
21	119 0069 125	Rubber key (B)		1
22	461 0740 002	Sheet		2
23	113 1357 207	P. SW. knob		1
24	146 2067 101	Loader panel		2
25	102 0425 253	Top cover		1
⚠ 26	233 6311 005	Power trans		1
⚠ 27	206 2155 001	AC cord with connector E3	for E3	1
⚠ 27	206 2089 106	AC cord with connector E2	for E2	1
⚠ 27	206 2128 009	AC cord with connector EK	for EK	1
⚠ 28	206 1039 034	Fuse 1A	F601, for E3	1
⚠ 28	206 1036 008	Fuse 630mA	F601, for E2/EK	1
⚠ 29	206 1039 092	Fuse 4.0AT	F602, for E3	1
⚠ 29	206 1015 087	Fuse 4.0A	F602, for E2/EK	1
⚠ 30	206 1039 089	Fuse 3.15A	F603, for E3	1
⚠ 30	206 1015 074	Fuse 3.15A	F603, for E2/EK	1
★ 31	445 8028 009	Cord holder		1
★ 32	445 0033 005	Wire clamp band		2
★ 33	203 8440 025	5P PH-PH connector cord	CX051 to Mecha.	2
★ 34	204 2469 050	8P PH-PH connector cord	CX083 to Mecha.	2
★ 35	204 0479 042	6P connector cord (Red)	CX061 to Mecha.	2
★ 36	203 8440 038	5P PH-PH connector cord (Red)	CX052 to Mecha.	2
★ 37	009 0133 042	27P FFC	CX271 to CY271	2
★ 38	204 2661 049	8P PH-PH connector cord	CX081 to CY081	2
★ 39	203 5132 080	3P VH connector cord	CX021 to CY021	1
★ 40	513 2065 002	E2 laser caution	for E2	2
★ 41	513 3402 004	Fuse label	for F601, for E2/EK	1
★ 42	513 3402 017	Fuse label	for F602, for E2/EK	1
★ 43	513 3402 020	Fuse label	for F603, for E2/EK	1
★ 44	513 3335 003	Fuse caution label	for E3	1
★ 45	513 3161 073	Rating sheet	for E3	1
★ 45	513 3161 060	Rating sheet	for E2/EK	1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
★ 46	513 2303 007	Version label		1
★ 47	513 2728 006	Caution sheet (PU)		1
★ 48	513 1519 009	Manufacture date label	for E3	1
★ 49	513 2521 009	CE label	for E2/EK	1
★ 50	513 3160 100	E3 label	for E3	1
★ 51	513 0985 003	Inst. label	for E2/EK	1
★ 52	513 3384 009	C-UL mark US (813)	for E3	
★ 53	513 3253 004	C-TICK label	for E2/EK	1
★ 54	513 3159 001	FCC/class B caution	for E3	1

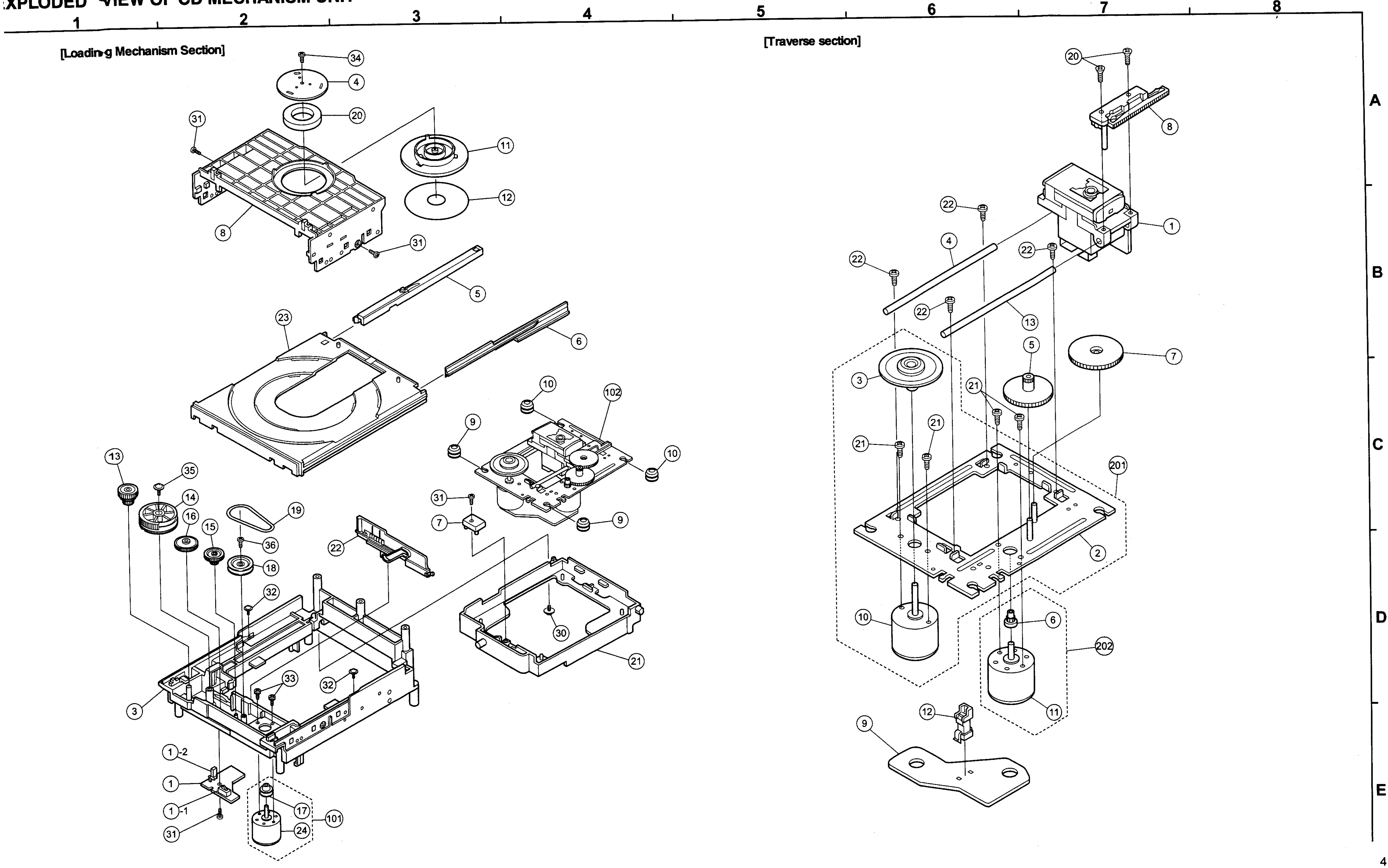
SCREWS & NUTS

Ref. No.	Part No.	Part Name	Remarks	Q'ty
101	471 3303 029	Screw 3×6 CBS-B		3
102	471 9050 020	Screw 3×6 FHHS MFZNII-B		14
103	473 7002 005	Screw 3×6 CBTS (S)-Z		13
104	473 7004 003	Screw 4×8 CBTS (S)-Z		4
105	473 7005 057	Screw 3×25 CBTS (S)-Z		4
106	473 7006 027	Screw 3×10 CBTS (S)-B		2
107	473 7015 018	Screw 3×8 CBTS (S)-B		30
108	473 7508 017	Screw 3×10 CBTS (P)-B		8
109	475 1178 009	Washer 3W-B		12
110	477 0263 005	3P. swelling screw		4

PARTS LIST OF MECHANISM UNIT (CD93F8)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
Loading Mechanism Section				
1	964 0001 004	PCB switch Ass'y		1
1-1	964 0003 507	Push switch	SW01	1
1-2	964 0003 400	Leaf switch	SW02	1
3	964 0001 101	Frame chassis		1
4	964 0001 208	Magnet plate		1
5	964 0001 305	Rail left Ass'y		1
6	964 0001 402	Rail right		1
7	964 0001 509	Chassis stopper		1
8	964 0001 606	Magnet support		1
9	964 0001 703	Rubber cushion (Blue)		2
10	964 0001 800	Rubber cushion (Purple)		2
11	964 0001 907	Magnet holder		1
12	964 0002 003	Sheet		1
13	964 0002 100	Loading gear		1
14	964 0002 207	Lifter gear		1
15	964 0002 304	Idler gear A		1
16	964 0002 401	Idler gear B		1
17	964 0002 508	Pulley motor		1
18	964 0002 605	Pulley gear		1
19	964 0002 702	Square belt		1
20	964 0002 809	Disk clamp magnet		1
21	964 0002 906	Lifter mecha		1
22	964 0003 002	Slide lifter		1
23	964 0003 109	Table loading		1
24	964 0003 206	Motor, 3.0V, 0.3W		1
101	964 0003 303	Loading moter Ass'y		1
102	964 0005 013	Traverse unit		1
30	944 0025 219	Screw 3 x 8		1
31	944 0056 013	Screw 2.6 x 8		4
32	944 0048 384	Screw 2 x 6		2
33	964 0004 001	Screw 1.7 x 3.5		2
34	964 0004 108	Special screw		1
35	964 0004 205	Screw 3 x 8		1
36	964 0004 302	Screw 2.6 x 8		1
Traverse Section				
1	964 0005 107	Laser pickup		1
2	–	Chassis Ass'y		1
3	–	Turntable Ass'y		1
4	964 0005 204	Guide bar		1
5	964 0005 301	Middle gear		1
6	964 0005 408	Motor gear		1
7	964 0005 505	Power gear		1
8	964 0005 602	Rack plate		1
9	964 0005 709	PCB morter		1
10	–	Motor, 2.0V,0.2W (Spindle Motor)		1
11	–	Motor, 3.0V,0.3W (Sled Moter)		1
12	964 0005 806	Leaf switch		1
13	964 0005 903	Pickup shaft		1
201	964 0007 011	Motor chassis Ass'y		1
202	964 0007 105	Motor Ass'y		1
20	964 0006 009	Screw 2 x 5		2
21	964 0006 106	Screw 1.7 x 2.5		4
22	964 0006 203	Special screw		4

XPLODED VIEW OF CD MECHANISM UNIT



[Loading Mechanism Section]

[Traverse section]

1
2
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5
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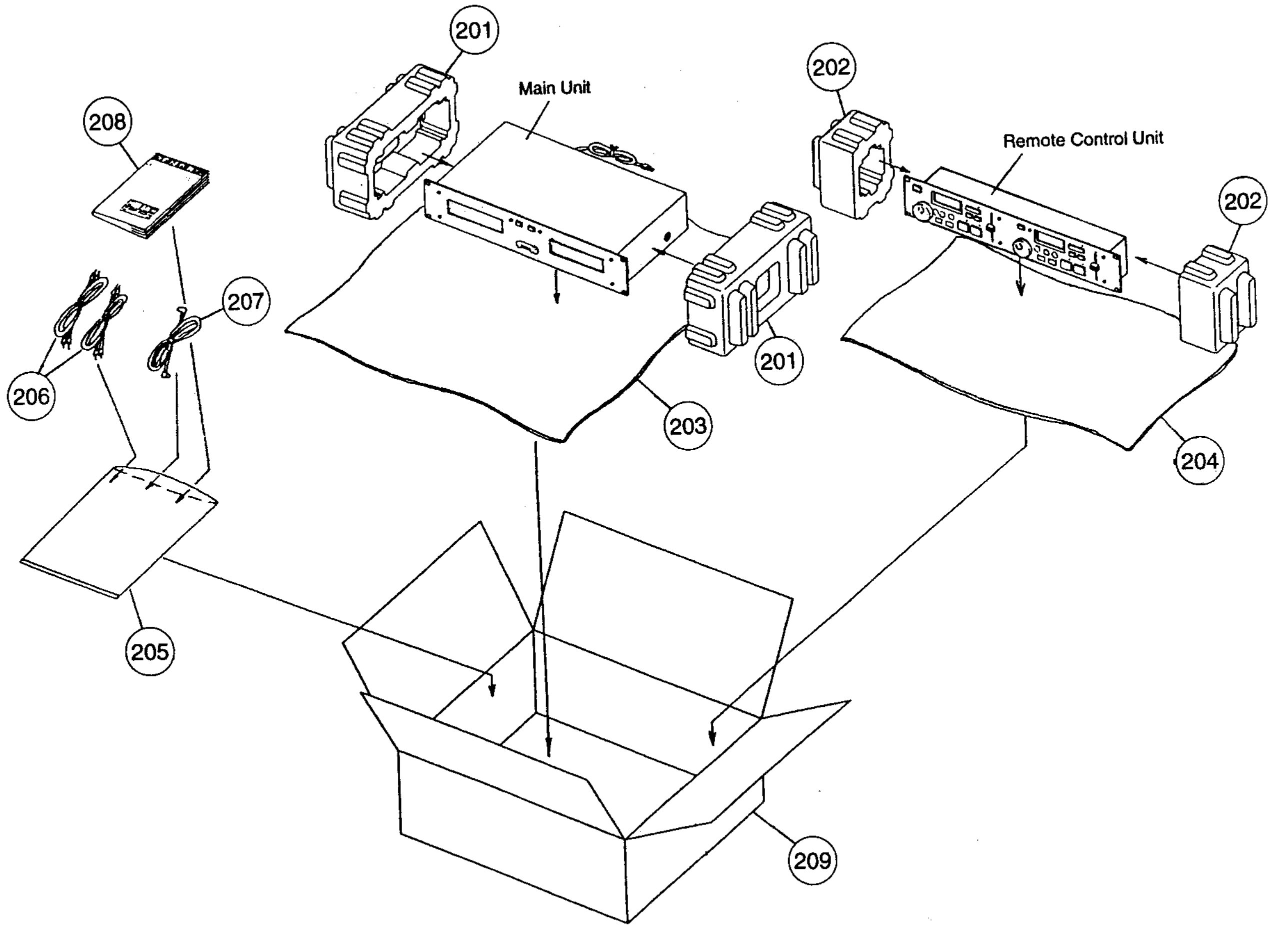
7
8
A
B
C
D
E
34
4
20
31
11
12
8
31
5
23
6
10
102
9
10
13
35
14
16
19
15
36
22
18
32
7
31
9
30
33
32
3
21
1-2
1
1-1
17
101
24
31
20
8
22
1
22
4
22
22
13
5
7
3
21
21
21
21
201
2
10
6
202
11
12
9

PACKING & ACCESSORIES

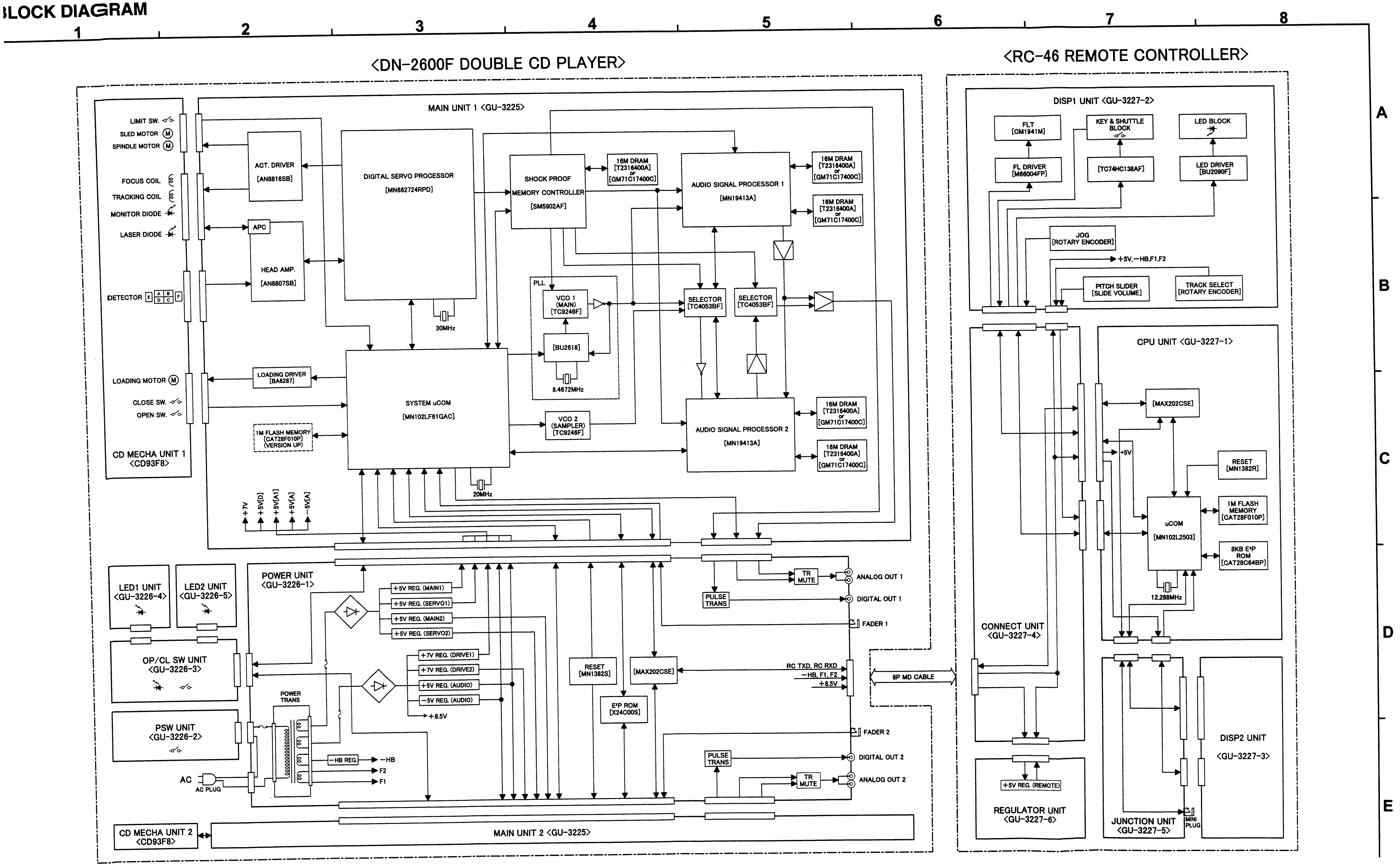


PARTS LIST OF PACKING & ACCESSORIES

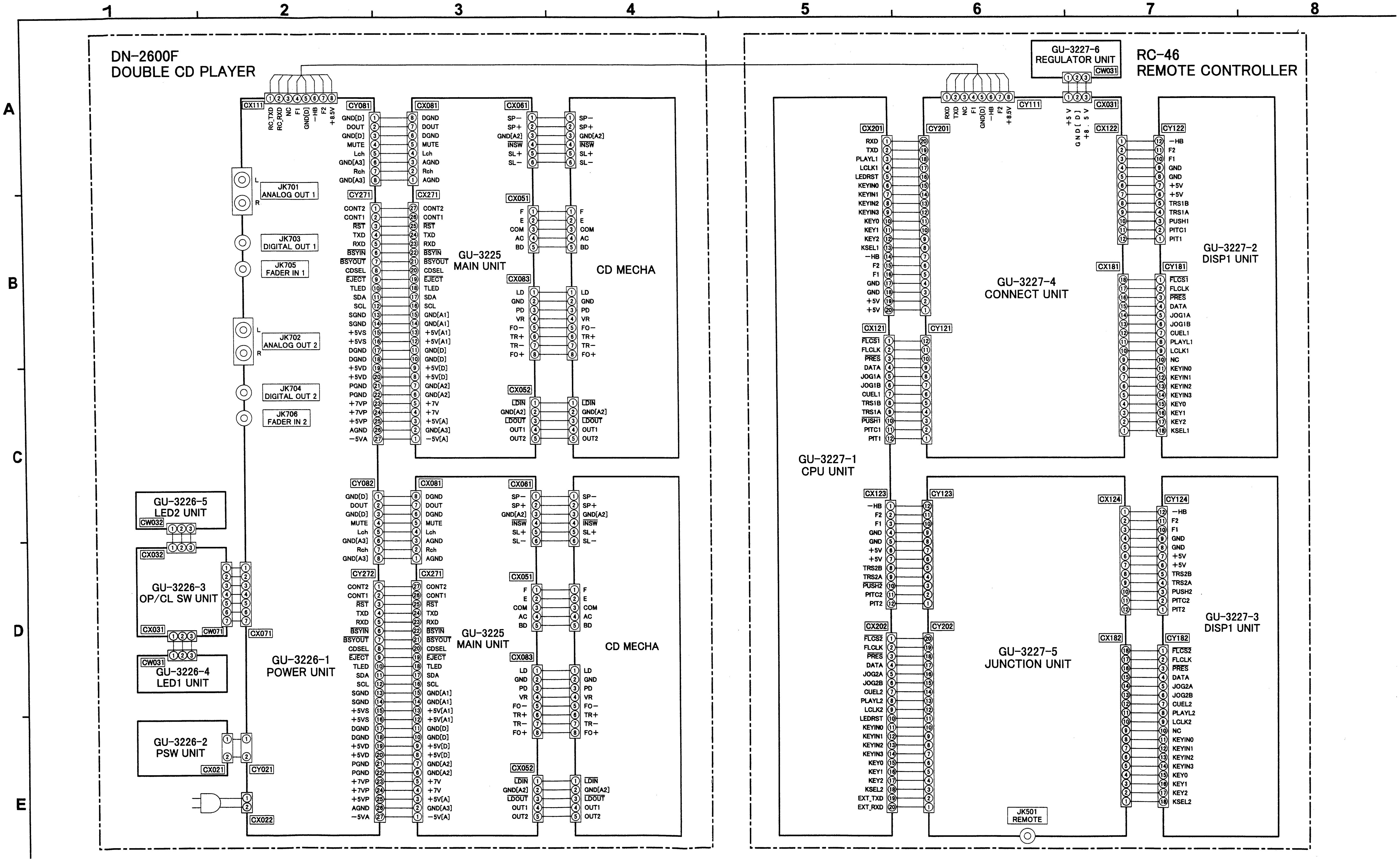
Note: The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A./Canada model
EK: U.K. model
E2: Europe model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
201	503 1001 400	Cushion	for main unit	2
202	503 1110 100	Cushion (RC)	for remote control unit	2
203	505 0102 092	Stylen paper	for main unit	1
204	505 0102 021	Stylen paper	for remote control unit	1
205	505 0038 030	Poly. cover		1
206	203 2360 004	2P Pin cord		2
207	204 2750 002	8P MD connector cord (L)		1
208	511 3534 002	Instruction manual		1
209	501 1982 086	Carton case		1
★ 210	513 3348 003	Caution label (Cord)		1
★ 211	513 2303 007	Version label		2
★ 212	515 0692 101	DEL warranty com.	for E3	1

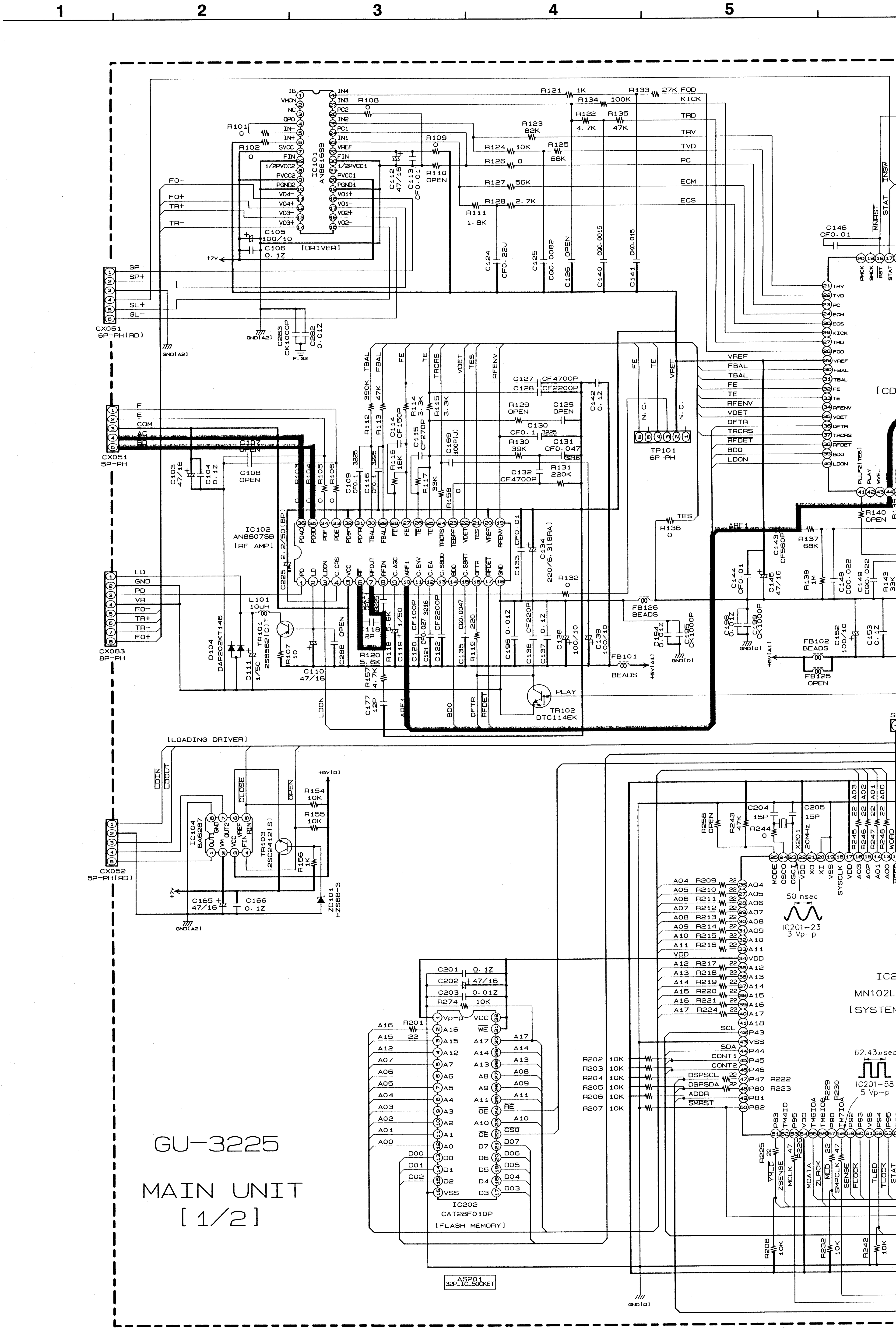
BLOCK DIAGRAM

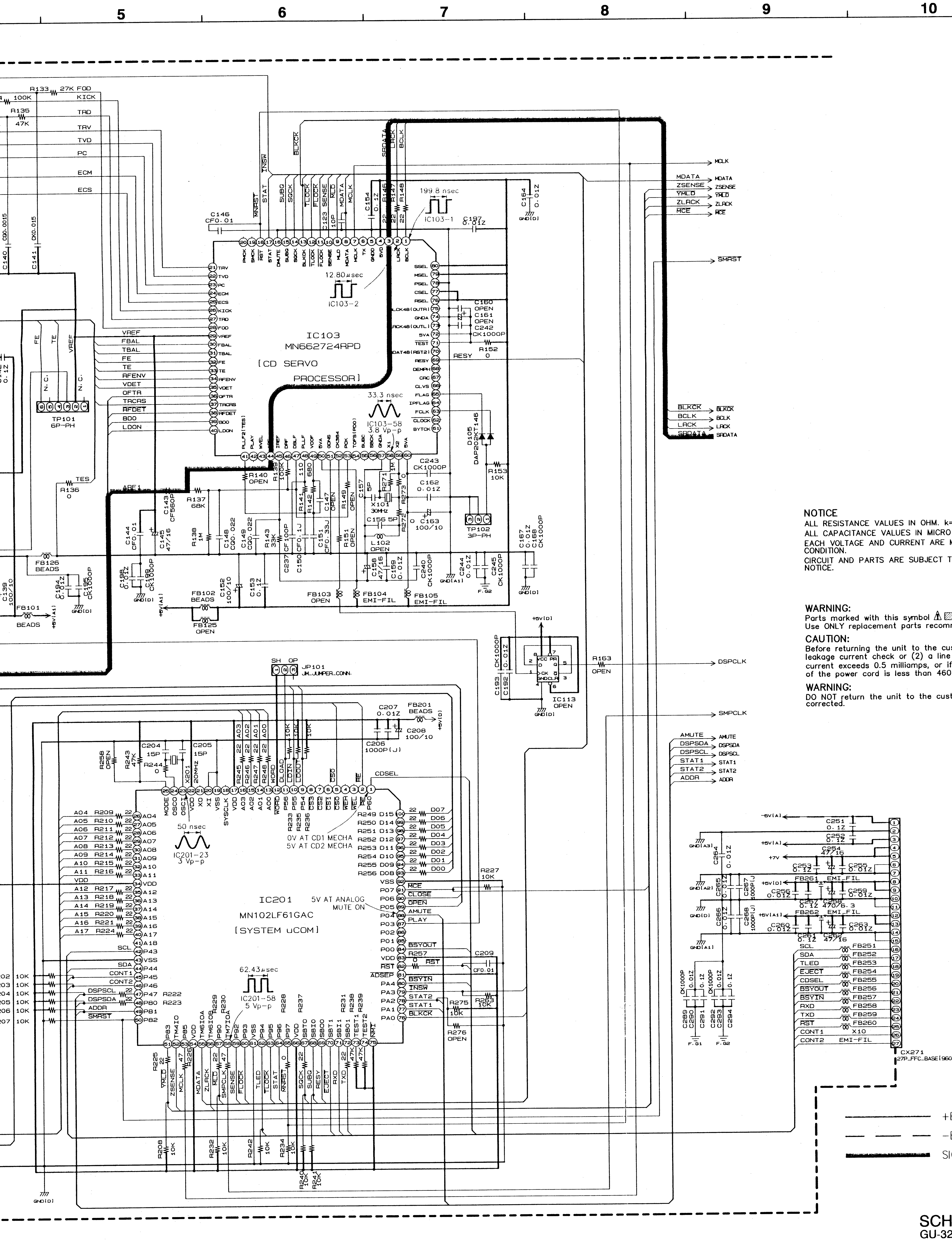

1
2
3
4
5
6
7
8
A
B
C
D
E
<DN-2600F DOUBLE CD PLAYER>
<RC-46 REMOTE CONTROLLER>
MAIN UNIT 1 <GU-3225>
LIMIT SW.
SLED MOTOR
SPINDLE MOTOR
FOCUS COIL
TRACKING COIL
MONITOR DIODE
LASER DIODE
DETECTOR
E
A
B
D
C
F
LOADING MOTOR
CLOSE SW.
OPEN SW.
CD MECHA UNIT 1
<CD93F8>
ACT. DRIVER
[AN8816SB]
APC
HEAD AMP.
[AN8807SB]
DIGITAL SERVO PROCESSOR
[MN662724RPD]
30MHz
LOADING DRIVER
[BA6287]
1M FLASH MEMORY
[CAT28F010P]
(VERSION UP)
SYSTEM uCOM
[MN102LF61GAC]
20MHz
SHOCK PROOF
MEMORY CONTROLLER
[SM5902AF]
16M DRAM
[T2316400A]
or
[GM71C17400C]
AUDIO SIGNAL PROCESSOR 1
[MN19413A]
PLL
VCO 1
(MAIN)
[TC9246F]
[BU2618]
8.4672MHz
VCO 2
(SAMPLER)
[TC9246F]
SELECTOR
[TC4053BF]
SELECTOR
[TC4053BF]
AUDIO SIGNAL PROCESSOR 2
[MN19413A]
+7V
+5V[D]
+5V[A1]
+5V[A]
−5V[A]
LED1 UNIT
<GU-3226-4>
LED2 UNIT
<GU-3226-5>
OP/CL SW UNIT
<GU-3226-3>
PSW UNIT
<GU-3226-2>
AC
AC PLUG
POWER UNIT
<GU-3226-1>
+5V REG. (MAIN1)
+5V REG. (SERVO1)
+5V REG. (MAIN2)
+5V REG. (SERVO2)
+7V REG. (DRIVE1)
+7V REG. (DRIVE2)
+5V REG. (AUDIO)
−5V REG. (AUDIO)
+8.5V
POWER
TRANS
−HB REG.
−HB
F2
F1
RESET
[MN1382S]
[MAX202CSE]
E²P ROM
[X24C00S]
TR
MUTE
ANALOG OUT 1
PULSE
TRANS
DIGITAL OUT 1
FADER 1
RC TXD, RC RXD
−HB, F1, F2
+8.5V
FADER 2
PULSE
TRANS
DIGITAL OUT 2
TR
MUTE
ANALOG OUT 2
CD MECHA UNIT 2
<CD93F8>
MAIN UNIT 2 <GU-3225>
8P MD CABLE
DISP1 UNIT <GU-3227-2>
FLT
[CM1941M]
KEY & SHUTTLE
BLOCK
LED BLOCK
FL DRIVER
[M66004FP]
[TC74HC138AF]
LED DRIVER
[BU2090F]
JOG
[ROTARY ENCODER]
+5V, −HB, F1, F2
PITCH SLIDER
[SLIDE VOLUME]
TRACK SELECT
[ROTARY ENCODER]
CPU UNIT <GU-3227-1>
[MAX202CSE]
+5V
RESET
[MN1382R]
uCOM
[MN102L2503]
1M FLASH
MEMORY
[CAT28F010P]
8KB E²P
ROM
[CAT28C64BP]
12.288MHz
CONNECT UNIT
<GU-3227-4>
REGULATOR UNIT
<GU-3227-6>
+5V REG. (REMOTE)
JUNCTION UNIT
<GU-3227-5>
MINI
PLUG
DISP2 UNIT
<GU-3227-3>

WIRING DIAGRAM


1
2
3
4
5
6
7
8
A
B
C
D
E
DN-2600F
DOUBLE CD PLAYER
RC-46
REMOTE CONTROLLER
GU-3227-6
REGULATOR UNIT
CW031
CX111
RC_TXD
RC_RXD
NC
F1
GND[D]
−HB
F2
+8.5V
CY081
CX081
CX061
CY271
CX271
CX051
CX083
CX052
GU-3225
MAIN UNIT
CD MECHA
JK701
ANALOG OUT 1
JK703
DIGITAL OUT 1
JK705
FADER IN 1
JK702
ANALOG OUT 2
JK704
DIGITAL OUT 2
JK706
FADER IN 2
L
R
CY082
CY272
GU-3226-5
LED2 UNIT
CW032
CX032
GU-3226-3
OP/CL SW UNIT
CX031
CW071
CX071
CW031
GU-3226-4
LED1 UNIT
GU-3226-1
POWER UNIT
GU-3226-2
PSW UNIT
CX021
CY021
CX022
CX201
CY201
CY111
CX031
CX122
CY122
CX181
CY181
CX121
CY121
GU-3227-1
CPU UNIT
GU-3227-4
CONNECT UNIT
GU-3227-2
DISP1 UNIT
CX123
CY123
CX124
CY124
CX202
CY202
CX182
CY182
GU-3227-5
JUNCTION UNIT
GU-3227-3
DISP1 UNIT
JK501
REMOTE

SCHEMATIC DIAGRAMS (1/4)


1
2
3
4
5
IC101
AN8816SB
[DRIVER]
R101
R102
R108
R109
R110
OPEN
C105
100/10
C106
0.1Z
C112
47/16
C113
CF0.01
R121 1K
R133 27K
R134 100K
R122 4.7K
R135 47K
R123 82K
R124 10K
R125 68K
R126 0
R127 56K
R128 2.7K
R111 1.8K
FOD
KICK
TRD
TRV
TVD
PC
ECM
ECS
C124 CF0.22J
C125 CQ0.0082
C126 OPEN
C140 CQ0.0015
C141 CK0.015
C146 CF0.01
CX061
6P-PH(RD)
SP-
SP+
SL+
SL-
FO-
FO+
TR+
TR-
C283 CK1000P
C282 0.01Z
GND(A2)
CX051
5P-PH
F
E
COM
AC
BD
C103 47/16
C104 0.1Z
C107 OPEN
C108 OPEN
IC102
AN8807SB
[RF AMP]
C225 2.2/50(BP)
R103
R104
R105
R106
R112 390K
R113 47K
R114 3.3K
R115 3.3K
R116 18K
R117 33K
R118 5.6K
R119 220
R120 5.6K
R130 39K
R131 220K
R132 0
R136 0
R137 68K
R138 1M
R140 OPEN
R143 33K
R157 4.7K
C127 CF4700P
C128 CF2200P
C129 OPEN
C130 CF0.1
C131 CF0.047
C132 CF4700P
C133 CF0.01
C134 220/6.3(SRA)
C142 0.1Z
C143 CF560P
C144 CF0.01
C145 47/16
C148 CQ0.022
C149 CQ0.022
VREF
FBAL
TBAL
FE
TE
RFENV
VDET
OFTR
TRCRS
RFDET
BDO
LDON
TES
ABF1
TP101
6P-PH
N.C.
CX083
8P-PH
LD
GND
PD
VR
L101 10uH
TR101 2SB562(C)T
D104 DAP202KT146
R107 10
C110 47/16
C111 1/50
C288 OPEN
C177 12P
FB101 BEADS
FB102 BEADS
FB125 OPEN
FB126 BEADS
TR102 DTC114EK
PLAY
+5V(A1)
GND(D)
[CD
[LOADING DRIVER]
CDIN
CDOUT
CLOSE
OPEN
IC104
BA6287
TR103
2SC2412(S)
R154 10K
R155 10K
R156 1K
ZD101 HZS6B-3
C165 47/16
C166 0.1Z
+5V(D)
+7V
CX052
5P-PH(RD)
IC202
CAT28F010P
[FLASH MEMORY]
C201 0.1Z
C202 47/16
C203 0.01Z
R274 10K
R201 22
AS201
32P_IC_SOCKET
GU-3225
MAIN UNIT
[1/2]
C204 15P
C205 15P
X201 20MHz
R243 47K
R244 0
R258 OPEN
50 nsec
IC201-23
3 Vp-p
IC2
MN102L
[SYSTEM
62.43μsec
IC201-58
5 Vp-p
R202 10K
R203 10K
R204 10K
R205 10K
R206 10K
R207 10K
R222
R223
R208 10K
R232 10K
R242 10K
SCL
SDA
CONT1
CONT2
DSPSCL
DSPSDA
ADDR
SMRST


5
6
7
8
9
10
IC103
MN662724RPD
[CD SERVO
PROCESSOR]
IC103-1
199.8 nsec
IC103-2
12.80 μsec
IC103-58
33.3 nsec
3.8 Vp-p
IC201
MN102LF61GAC
[SYSTEM uCOM]
5V AT ANALOG
MUTE ON
0V AT CD1 MECHA
5V AT CD2 MECHA
IC201-23
50 nsec
3 Vp-p
IC201-58
62.43 μsec
5 Vp-p
IC113
OPEN
TP101
6P-PH
TP102
3P-PH
JP101
JM_JUMPER_CONN.
SH OP
X101
30MHz
X201
20MHz
D105
DAP202KT146
MCLK
MDATA
ZSENSE
YMLD
ZLRCK
MCE
SMRST
BLKCK
BCLK
LRCK
SRDATA
DSPCLK
SMPCLK
AMUTE
DSPSDA
DSPSCL
STAT1
STAT2
ADDR
CX271
27P_FFC_BASE(960
FB261 EMI-FIL
FB262 EMI-FIL
+5V(A)
-5V(A)
+7V
+5V(D)
+5V(A1)
GND(D)
GND(A1)
GND(A2)
GND(A3)
SCL
SDA
TLED
EJECT
CDSEL
BSYOUT
BSYIN
RXD
TXD
RST
CONT1
CONT2
X10
EMI-FIL
+E
-E
SI

NOTICE

ALL RESISTANCE VALUES IN OHM. k=

ALL CAPACITANCE VALUES IN MICRO

EACH VOLTAGE AND CURRENT ARE M
CONDITION.

CIRCUIT AND PARTS ARE SUBJECT T
NOTICE.

WARNING:

Parts marked with this symbol ⚠▨
Use ONLY replacement parts recomm

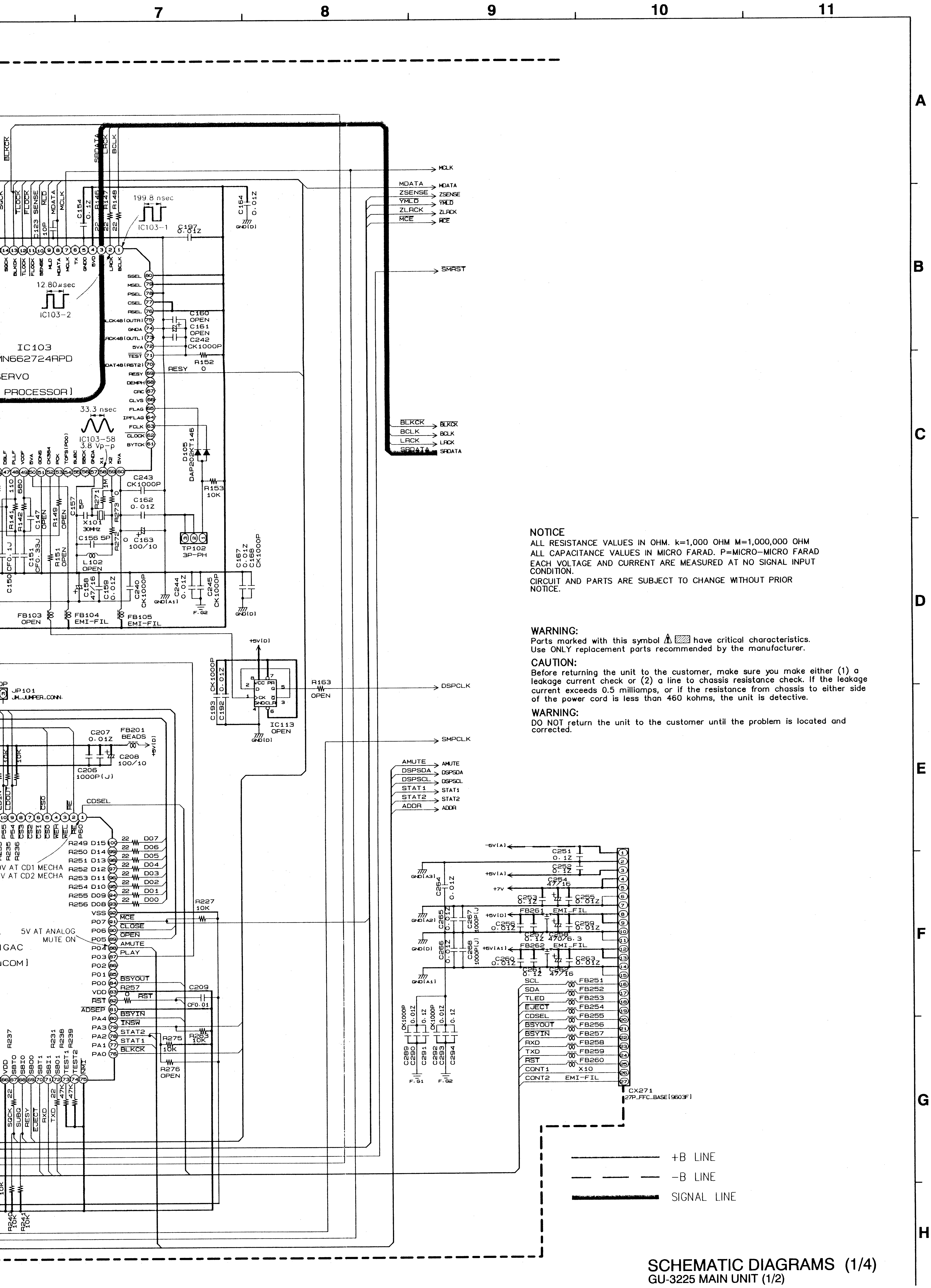
CAUTION:

Before returning the unit to the cus
leakage current check or (2) a line
current exceeds 0.5 milliamps, or if
of the power cord is less than 460

WARNING:

DO NOT return the unit to the cust
corrected.

SCH
GU-32


7
8
9
10
11
A
B
C
D
E
F
G
H
IC103
MN662724RPD
SERVO
PROCESSOR]
199.8 nsec
IC103-1
12.80μsec
IC103-2
33.3 nsec
IC103-58
3.8 Vp-p
MCLK
MDATA
ZSENSE
YMLD
ZLRCK
MCE
SMRST
BLKCK
BCLK
LRCK
SRDATA
C160 OPEN
C161 OPEN
C242 CK1000P
R152 0
RESY
D105 DAP202KT146
R153 10K
TP102 3P-PH
C243 CK1000P
C162 0.01Z
C163 100/10
X101 30MHz
C156 5P
L102 OPEN
FB103 OPEN
FB104 EMI-FIL
FB105 EMI-FIL
C167 0.01Z
C168 CK1000P
C244 0.01Z
C245 CK1000P
+5V(D)
IC113 OPEN
R163 OPEN
DSPCLK
SMPCLK
JP101 JM_JUMPER_CONN.
C207 0.01Z
FB201 BEADS
C208 100/10
C206 1000P(J)
CDSEL
AMUTE
DSPSDA
DSPSCL
STAT1
STAT2
ADDR
5V AT CD1 MECHA
5V AT CD2 MECHA
5V AT ANALOG MUTE ON
R227 10K
C209 CF0.01
R275 10K
R265 10K
R276 OPEN
MCE
CLOSE
OPEN
AMUTE
PLAY
BSYOUT
R257
RST
ADSEP
BSYIN
INSW
STAT2
STAT1
BLKCK
-5V(A)
+5V(A)
+7V
+5V(D)
+5V(A1)
C251 0.1Z
C252 0.1Z
C254 47/16
C253 0.1Z
C255 0.01Z
FB261 EMI-FIL
C256 0.01Z
C259 0.01Z
C257 0.1Z
C258 470/6.3
FB262 EMI-FIL
C260 0.01Z
C263 0.01Z
C261 0.1Z
C262 47/16
SCL
SDA
TLED
EJECT
CDSEL
BSYOUT
BSYIN
RXD
TXD
RST
CONT1
CONT2
FB251
FB252
FB253
FB254
FB255
FB256
FB257
FB258
FB259
FB260
X10
EMI-FIL
CX271
27P_FFC_BASE(9603F)
C264 0.01Z
C265 0.01Z
C267 1000P(J)
C266 0.01Z
C268 1000P(J)
C289 CK1000P
C290 0.1Z
C291
C292 CK1000P
C293 0.01Z
C294 0.1Z
GND(A3)
GND(A2)
GND(D)
GND(A1)
F.G1
F.G2
+B LINE
-B LINE
SIGNAL LINE

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

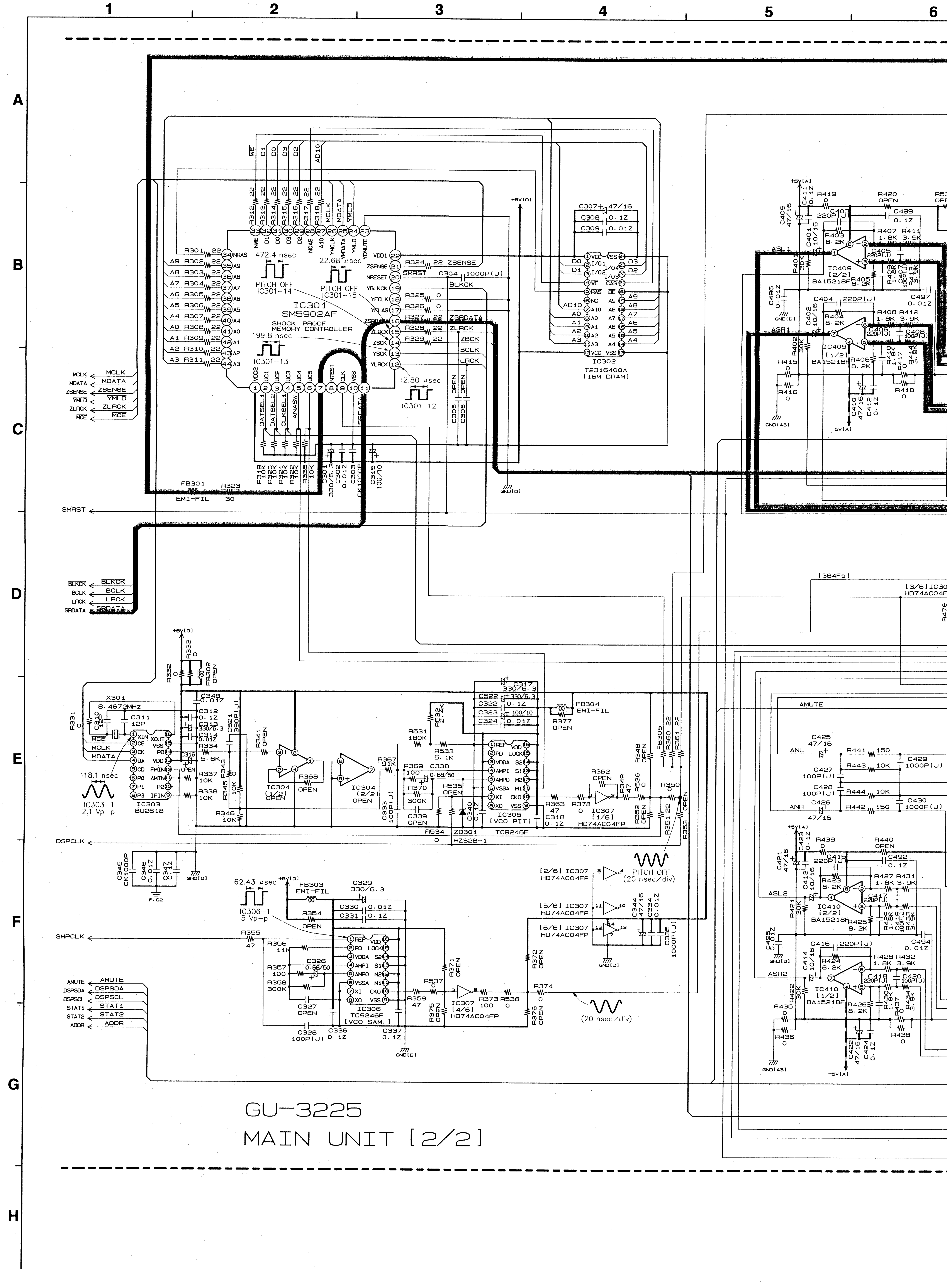
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

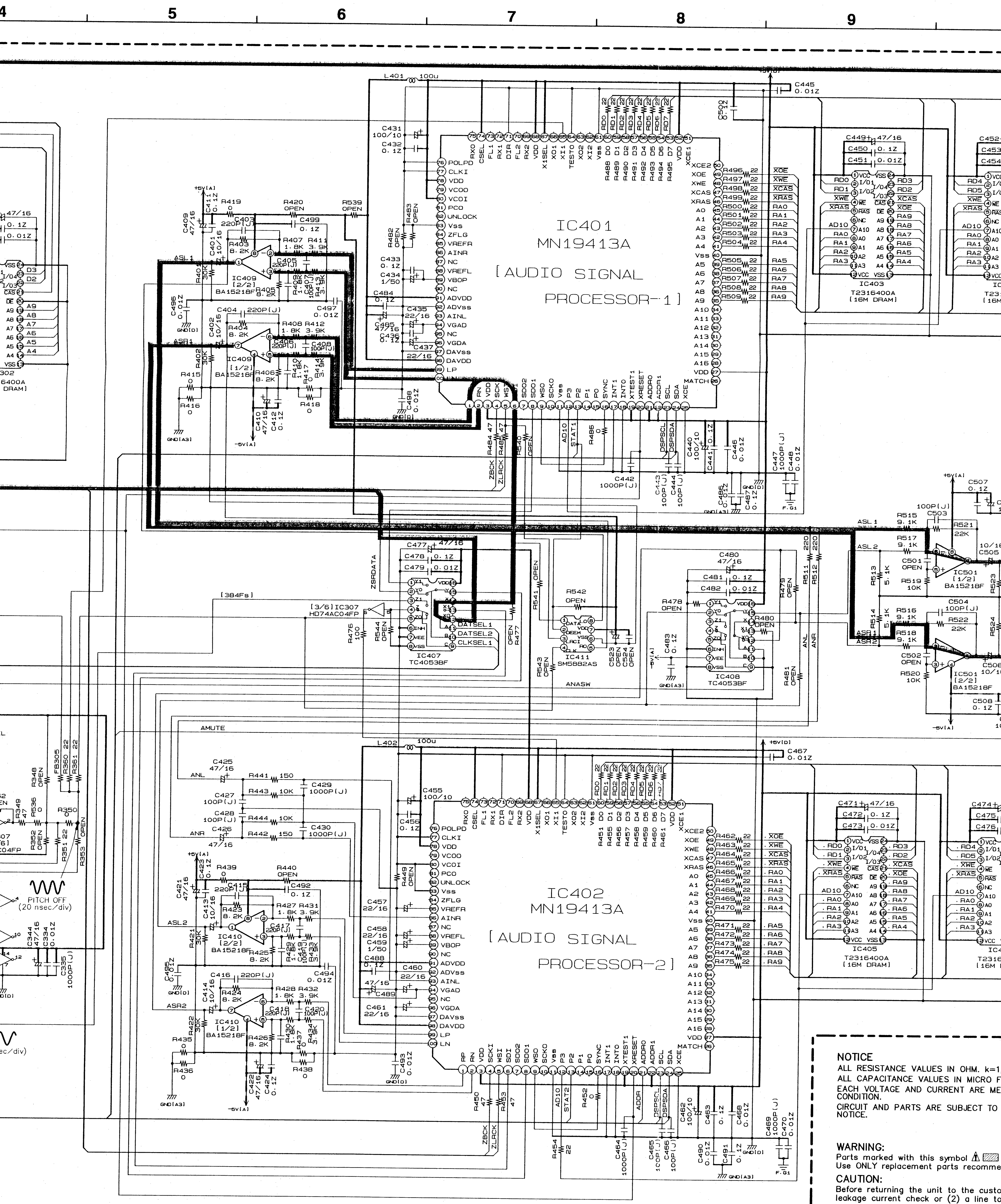
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (1/4)
GU-3225 MAIN UNIT (1/2)

SCHEMATIC DIAGRAMS (2/4)


1
2
3
4
5
6
A
B
C
D
E
F
G
H
IC301
SM5902AF
SHOCK PROOF
MEMORY CONTROLLER
472.4 nsec
PITCH OFF
IC301-14
22.68 μsec
PITCH OFF
IC301-15
199.8 nsec
IC301-13
12.80 μsec
IC301-12
IC302
T2316400A
[16M DRAM]
FB301
EMI-FIL
R323
30
MCLK
MDATA
ZSENSE
YMLD
ZLRCK
MCE
SMRST
BLKCK
BCLK
LRCK
SRDATA
X301
8.4672MHz
IC303
BU2618
118.1 nsec
IC303-1
2.1 Vp-p
IC304
(1/2)
OPEN
IC304
(2/2)
OPEN
IC305
[VCO PIT]
TC9246F
FB304
EMI-FIL
IC307
[1/6]
HD74AC04FP
ZD301
HZS28-1
DSPCLK
[2/6] IC307
HD74AC04FP
[5/6] IC307
HD74AC04FP
[6/6] IC307
HD74AC04FP
PITCH OFF
(20 nsec/div)
62.43 μsec
IC306-1
5 Vp-p
FB303
EMI-FIL
IC306
TC9246F
[VCO SAM.]
IC307
[4/6]
HD74AC04FP
(20 nsec/div)
SMPCLK
AMUTE
DSPSDA
DSPSCL
STAT1
STAT2
ADDR
IC409
[2/2]
BA15218F
IC409
[1/2]
BA15218F
ASL1
ASR1
[384Fs]
[3/6] IC30
HD74AC04F
AMUTE
ANL
ANR
IC410
[2/2]
BA15218F
IC410
[1/2]
BA15218F
ASL2
ASR2
+5V[D]
+5V[A]
-5V[A]
GND[D]
GND[A3]
F.G2
GU-3225
MAIN UNIT [2/2]


4
5
6
7
8
9
IC401
MN19413A
[AUDIO SIGNAL
PROCESSOR-1]
IC402
MN19413A
[AUDIO SIGNAL
PROCESSOR-2]
IC403
T2316400A
[16M DRAM]
IC405
T2316400A
[16M DRAM]
IC407
TC4053BF
IC408
TC4053BF
IC409
BA15218F
IC410
BA15218F
IC411
SM5882AS
IC501
BA15218F
[3/6] IC307
HD74AC04FP
L401 100u
L402 100u
PITCH OFF
(20 nsec/div)
ASL1
ASR1
ASL2
ASR2
AMUTE
ANASW
ZSRDATA
ZBCK
ZLRCK
DATSEL1
DATSEL2
CLKSEL1
[384Fs]

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1
ALL CAPACITANCE VALUES IN MICRO F
EACH VOLTAGE AND CURRENT ARE ME
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO
NOTICE.

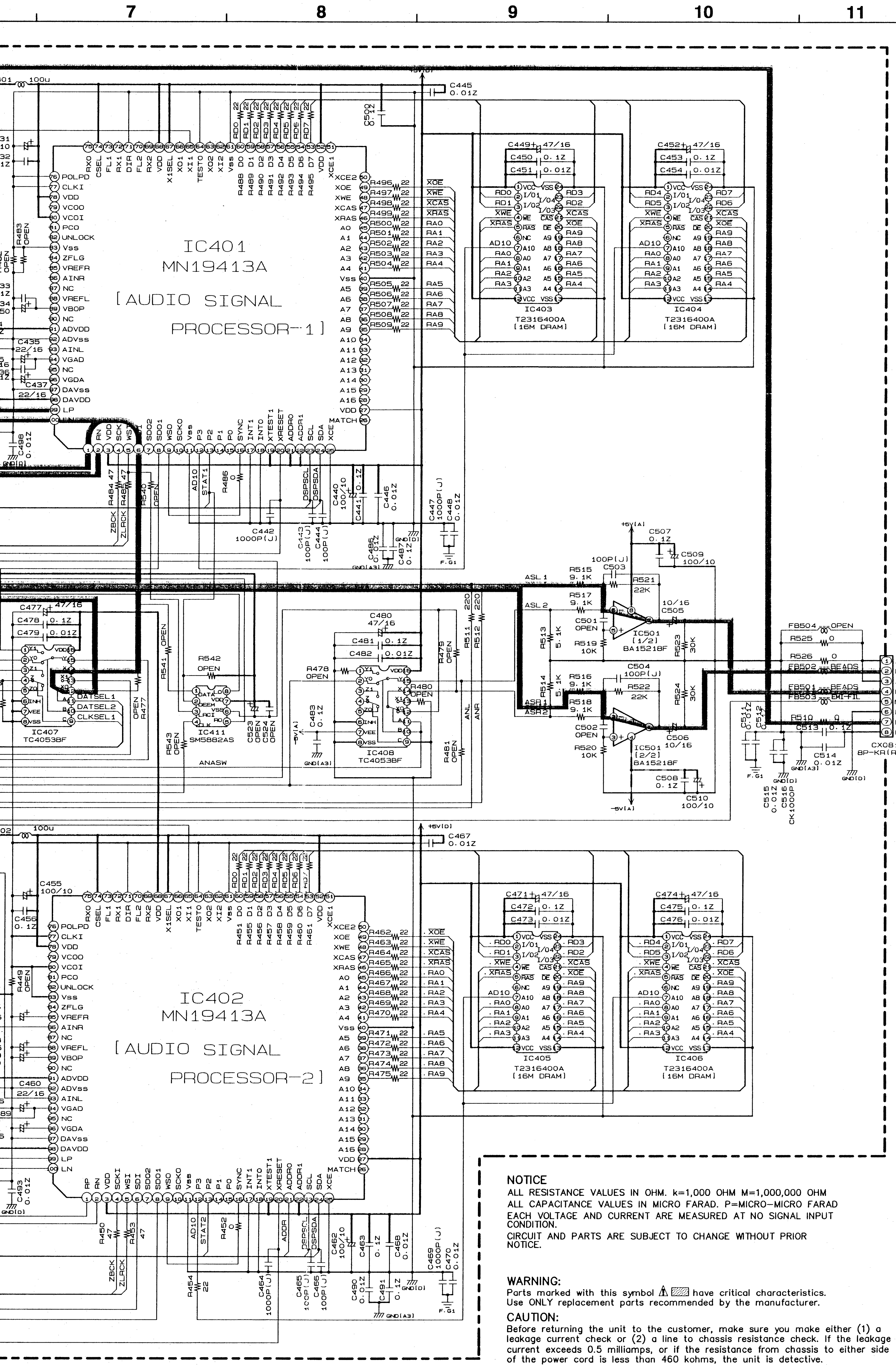
WARNING:
Parts marked with this symbol ⚠ ▨
Use ONLY replacement parts recomme

CAUTION:
Before returning the unit to the custo
leakage current check or (2) a line to
current exceeds 0.5 milliamps, or if th
of the power cord is less than 460 k

WARNING:
DO NOT return the unit to the custom
corrected.

━━━ +B LINE
— — — -B LINE
▬▬▬ SIGNAL LINE

SCHEMATIC DIAGRAMS (2/4)
GU-3225 MAIN UNIT (2/2)



7
8
9
10
11
IC401
MN19413A
[AUDIO SIGNAL PROCESSOR-1]
IC402
MN19413A
[AUDIO SIGNAL PROCESSOR-2]
IC403
T2316400A
[16M DRAM]
IC404
T2316400A
[16M DRAM]
IC405
T2316400A
[16M DRAM]
IC406
T2316400A
[16M DRAM]
IC407
TC4053BF
IC408
TC4053BF
IC411
SM5882AS
IC501
[1/2]
BA15218F
IC501
[2/2]
BA15218F
CX081
8P-KR(RD)s
AGND
Rch
AGND
Lch
MUTE
DGND
DOUT
DGND
+5V(D)
+5V(A)
-5V(A)
ANASW
+B LINE
-B LINE
SIGNAL LINE

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

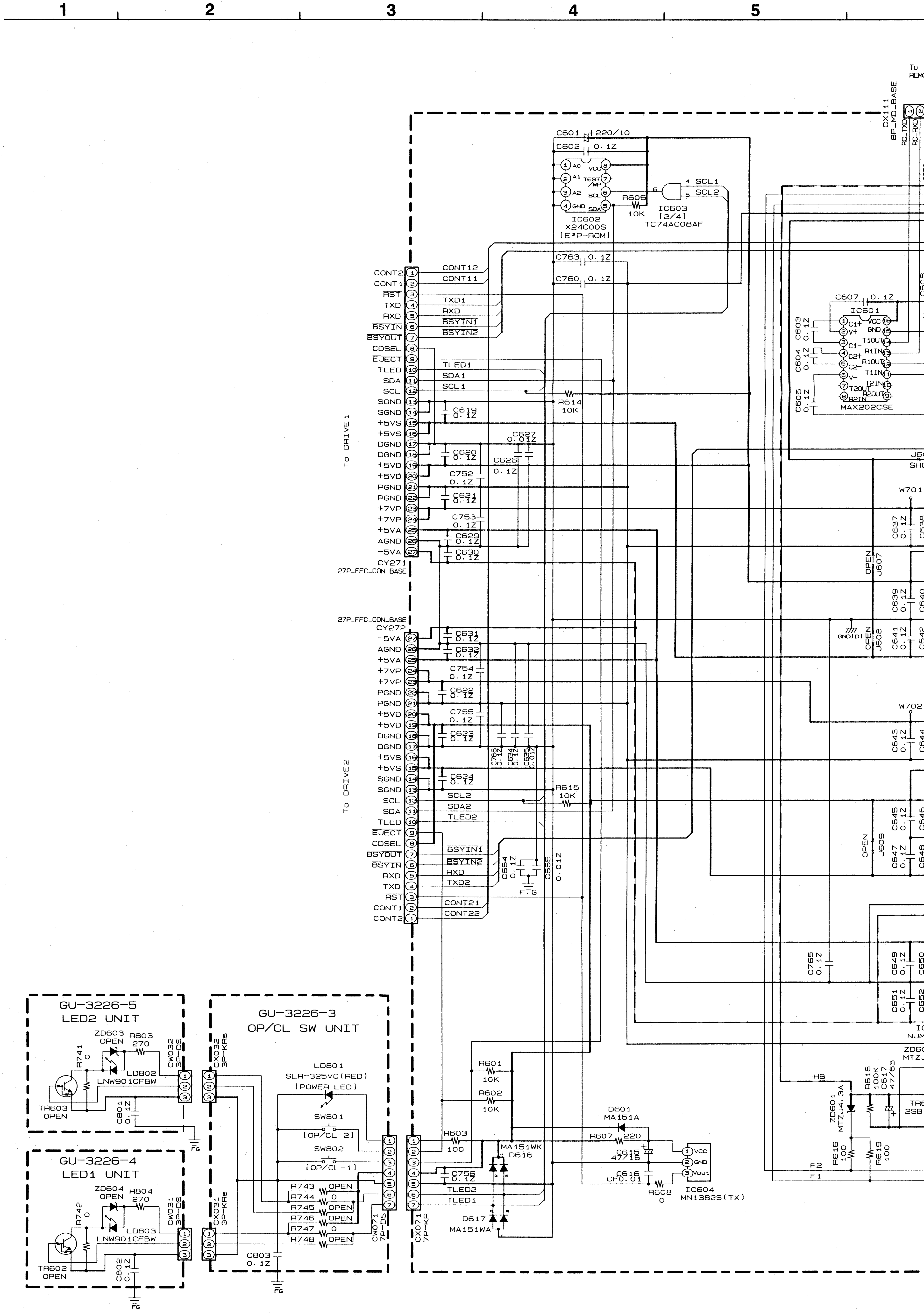
WARNING:

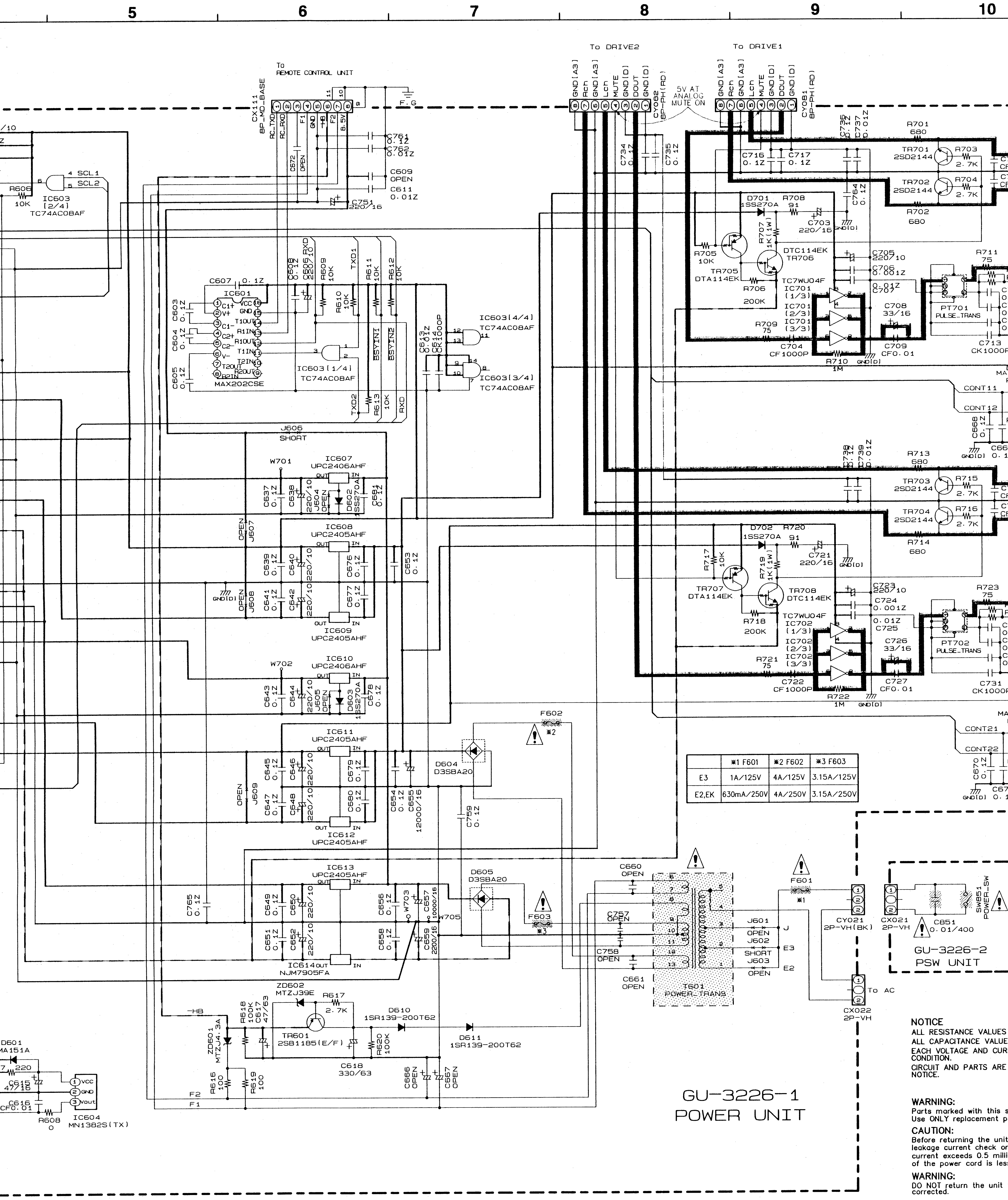
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (2/4)

GU-3225 MAIN UNIT (2/2)

SCHEMATIC DIAGRAMS (3/4)


1
2
3
4
5
To REMO
CX111
8P_MD_BASE
RC_TXD
RC_RXD
C601 220/10
C602 0.1Z
IC602
X24C00S
[E²P-ROM]
A0
A1
A2
GND
VCC
TEST/WP
SCL
SDA
R606
10K
IC603
[2/4]
TC74AC08AF
4 SCL1
5 SCL2
C763 0.1Z
C760 0.1Z
C607 0.1Z
IC601
MAX202CSE
C603 0.1Z
C604 0.1Z
C605 0.1Z
C1+
V+
C1-
C2+
C2-
V-
T2OUT
R2IN
VCC
GND
T1OUT
R1IN
R1OUT
T1IN
T2IN
R2OUT
To DRIVE1
CONT2
CONT1
RST
TXD
RXD
BSYIN
BSYOUT
CDSEL
EJECT
TLED
SDA
SCL
SGND
+5VS
DGND
+5VD
PGND
+7VP
+5VA
AGND
-5VA
CY271
27P_FFC_CON_BASE
CONT12
CONT11
TXD1
RXD
BSYIN1
BSYIN2
TLED1
SDA1
SCL1
R614
10K
C619 0.1Z
C620 0.1Z
C627 0.01Z
C626 0.1Z
C752 0.1Z
C621 0.1Z
C753 0.1Z
C629 0.1Z
C630 0.1Z
J60
SHO
W701
C637 0.1Z
C638
OPEN
J607
C639 0.1Z
C640
GND(D)
J608
C641 0.1Z
C642
27P_FFC_CON_BASE
CY272
To DRIVE2
C631 0.1Z
C632 0.1Z
C754 0.1Z
C622 0.1Z
C755 0.1Z
C623 0.1Z
C756 0.1Z
C634 0.1Z
C635 0.01Z
C624 0.1Z
SCL2
SDA2
TLED2
R615
10K
BSYIN1
BSYIN2
RXD
TXD2
CONT21
CONT22
C664 0.1Z
C665 0.01Z
F.G
W702
C643 0.1Z
C644
C645 0.1Z
C646
J609
C647 0.1Z
C648
C765 0.1Z
C649 0.1Z
C650
C651 0.1Z
C652
IC
NJM
ZD60
MTZ
-HB
R618 100K
C617 47/63
ZD601
MTZJ4.3A
TR6
2SB
R616 100
R619 100
F2
F1
GU-3226-5
LED2 UNIT
ZD603 OPEN
R803 270
R741 0
LD802
LNW901CFBW
TR603 OPEN
C801 0.1Z
CW032 3P-DS
FG
GU-3226-4
LED1 UNIT
ZD604 OPEN
R804 270
R742 0
LD803
LNW901CFBW
TR602 OPEN
C802 0.1Z
CW031 3P-DS
FG
GU-3226-3
OP/CL SW UNIT
CX032 3P-KRs
CX031 3P-KRs
LD801
SLR-325VC(RED)
[POWER LED]
SW801
[OP/CL-2]
SW802
[OP/CL-1]
R743 OPEN
R744 0
R745 OPEN
R746 OPEN
R747 0
R748 OPEN
C803 0.1Z
FG
CW071 7P-DS
CX071 7P-KR
R601 10K
R602 10K
R603 100
C756 0.1Z
TLED2
TLED1
MA151WK
D616
D617
MA151WA
D601
MA151A
R607 220
C615 47/16
C616 CF0.01
R608 0
IC604
MN1382S(TX)
VCC
GND
Vout



5
6
7
8
9
10
To DRIVE2
To DRIVE1
To REMOTE CONTROL UNIT
CX111 8P_MD_BASE
F.G
5V AT ANALOG MUTE ON
CY082 8P-PH(RD)
CY081 8P-PH(RD)
GND(A3)
Rch
Lch
MUTE
GND(D)
DOUT
IC601 MAX202CSE
IC603 TC74AC08AF
IC604 MN1382S(TX)
IC607 UPC2406AHF
IC608 UPC2405AHF
IC609 UPC2405AHF
IC610 UPC2406AHF
IC611 UPC2405AHF
IC612 UPC2405AHF
IC613 UPC2405AHF
IC614 NJM7905FA
D604 D3SBA20
D605 D3SBA20
D610 1SR139-200T62
D611 1SR139-200T62
ZD601 MTZJ4.3A
ZD602 MTZJ39E
TR601 2SB1185(E/F)
TR701 2SD2144
TR702 2SD2144
TR703 2SD2144
TR704 2SD2144
TR705 DTA114EK
TR706 DTC114EK
TR707 DTA114EK
TR708 DTC114EK
IC701 TC7WU04F
IC702 TC7WU04F
D701 1SS270A
D702 1SS270A
PT701 PULSE_TRANS
PT702 PULSE_TRANS
T601 POWER_TRANS
F601 ※1
F602 ※2
F603 ※3
J601 OPEN
J602 SHORT
J603 OPEN
J606 SHORT
E3
E2
CY021 2P-VH(BK)
CX021 2P-VH
CX022 2P-VH
To AC
SW851 POWER_SW
C851 0.01/400
CONT11
CONT12
CONT21
CONT22
-HB
F1
F2
GU-3226-1
POWER UNIT
GU-3226-2
PSW UNIT

	※1 F601	※2 F602	※3 F603
E3	1A/125V	4A/125V	3.15A/125V
E2,EK	630mA/250V	4A/250V	3.15A/250V

NOTICE

ALL RESISTANCE VALUES

ALL CAPACITANCE VALUE

EACH VOLTAGE AND CUR CONDITION.

CIRCUIT AND PARTS ARE NOTICE.

WARNING:

Parts marked with this s

Use ONLY replacement p

CAUTION:

Before returning the unit leakage current check or current exceeds 0.5 milli of the power cord is less

WARNING:

DO NOT return the unit corrected.

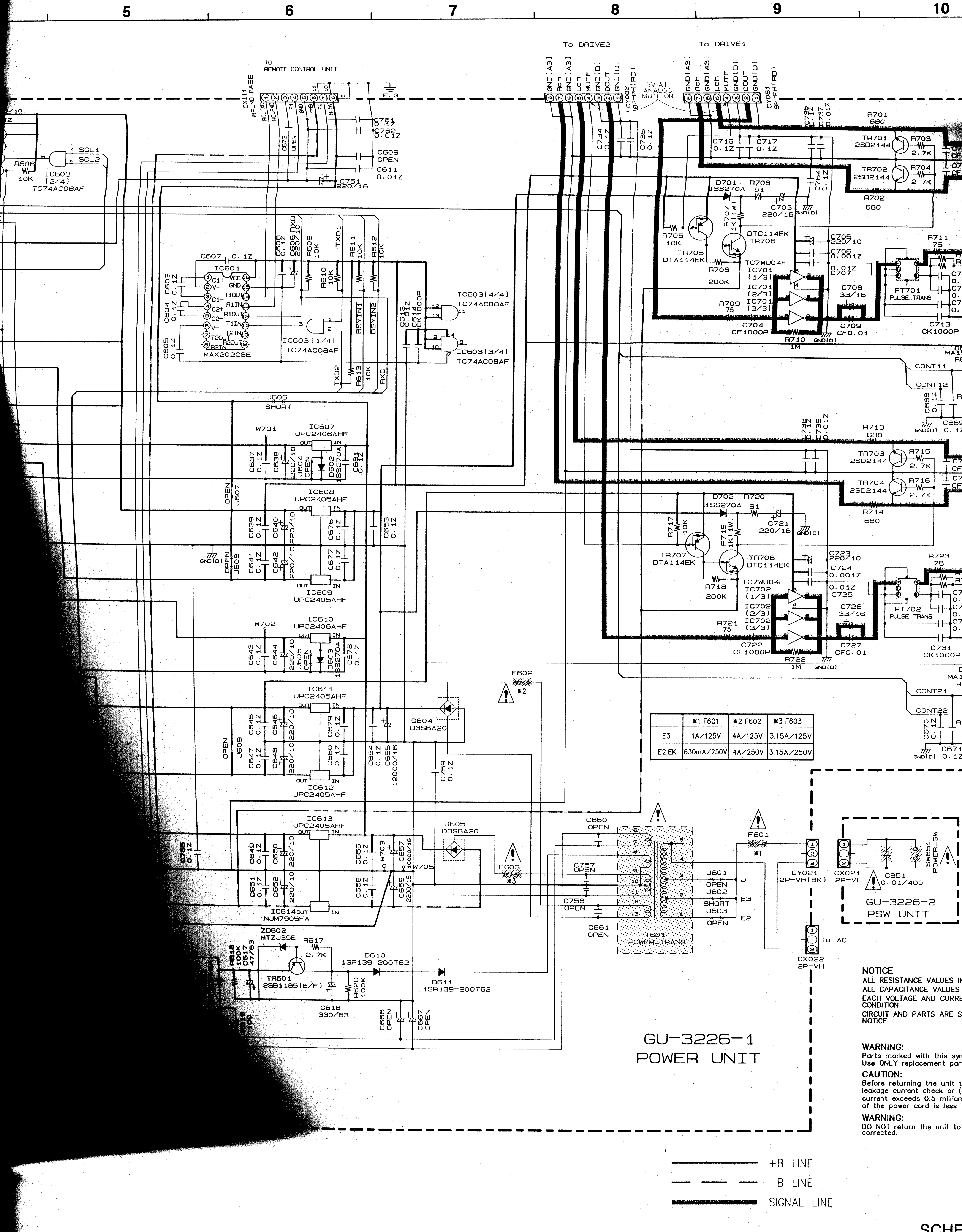
+B LINE

-B LINE

SIGNAL LINE

SCH

GU-32


5
6
7
8
9
10
To REMOTE CONTROL UNIT
CX111 8P_MD_BASE
RC_TXD
RC_RXD
F1
GND
+B
F2
8.5V
F.G
To DRIVE2
CY082 8P-PH(RD)
5V AT ANALOG MUTE ON
To DRIVE1
CY081 8P-PH(RD)
GND(A3)
Rch
Lch
MUTE
GND(D)
DOUT
C761 0.1Z
C762 0.01Z
C609 OPEN
C611 0.01Z
C751 220/16
C672 OPEN
R606 10K
IC603 [2/4] TC74AC08AF
SCL1
SCL2
C607 0.1Z
IC601 MAX202CSE
C603 0.1Z
C604 0.1Z
C605 0.1Z
C608 0.1Z
C606 220/10
R609 10K
R610 10K
R611 10K
R612 10K
R613 10K
RXD
TXD1
TXD2
BSYIN1
BSYIN2
IC603[1/4] TC74AC08AF
IC603[4/4] TC74AC08AF
IC603[3/4] TC74AC08AF
C613 0.1Z
C614 CK1000P
J606 SHORT
W701
IC607 UPC2406AHF
C637 0.1Z
C638 220/10
J604 OPEN
D602 1SS270A
C681 0.1Z
J607 OPEN
IC608 UPC2405AHF
C639 0.1Z
C640 220/10
C676 0.1Z
C653 0.1Z
J608 OPEN
C641 0.1Z
C642 220/10
C677 0.1Z
IC609 UPC2405AHF
W702
IC610 UPC2406AHF
C643 0.1Z
C644 220/10
J605 OPEN
D603 1SS270A
C678 0.1Z
IC611 UPC2405AHF
J609 OPEN
C645 0.1Z
C646 220/10
C679 0.1Z
C647 0.1Z
C648 220/10
C680 0.1Z
IC612 UPC2405AHF
C654 0.1Z
C655 12000/16
D604 D3SBA20
F602 *2
C759 0.1Z
IC613 UPC2405AHF
C649 0.1Z
C650 220/10
C651 0.1Z
C652 220/10
C656 0.1Z
C658 0.1Z
W703
C657 10000/16
C659 2200/16
W705
IC614 NJM7905FA
C765 0.1Z
D605 D3SBA20
F603 *3
C660 OPEN
C757 OPEN
C758 OPEN
C661 OPEN
T601 POWER_TRANS
J601 OPEN
J602 SHORT
J603 OPEN
J
E3
E2
F601 *1
CY021 2P-VH(BK)
CX021 2P-VH
C851 0.01/400
SW851 POWER_SW
GU-3226-2 PSW UNIT
CX022 2P-VH
To AC
ZD602 MTZJ39E
R617 2.7K
R618 100K
C617 47/63
TR601 2SB1185(E/F)
R620 100K
C618 330/63
D610 1SR139-200T62
D611 1SR139-200T62
C666 OPEN
C667 OPEN
R619 100
GU-3226-1 POWER UNIT
C734 0.1Z
C735 0.1Z
C736 0.1Z
C737 0.01Z
C716 0.1Z
C717 0.1Z
R701 680
TR701 2SD2144
R703 2.7K
TR702 2SD2144
R704 2.7K
R702 680
D701 1SS270A
R708 91
C703 220/16
C764 0.1Z
GND(D)
R707 1K(1W)
R705 10K
TR705 DTA114EK
DTC114EK TR706
R706 200K
C705 220/10
C706 0.001Z
C707 0.01Z
TC7WU04F
IC701 (1/3)
IC701 (2/3)
IC701 (3/3)
R709 75
C704 CF1000P
R710 1M
C708 33/16
C709 CF0.01
R711 75
PT701 PULSE_TRANS
C713 CK1000P
CONT11
CONT12
C668 0.1Z
C669 0.1Z
C738 0.1Z
C739 0.01Z
R713 680
TR703 2SD2144
R715 2.7K
TR704 2SD2144
R716 2.7K
R714 680
D702 1SS270A
R720 91
C721 220/16
R717 10K
R719 1K(1W)
TR707 DTA114EK
TR708 DTC114EK
R718 200K
C723 220/10
C724 0.001Z
C725 0.01Z
TC7WU04F
IC702 (1/3)
IC702 (2/3)
IC702 (3/3)
R721 75
C722 CF1000P
R722 1M
C726 33/16
C727 CF0.01
R723 75
PT702 PULSE_TRANS
C731 CK1000P
CONT21
CONT22
C670 0.1Z
C671 0.1Z
+B LINE
-B LINE
SIGNAL LINE

	*1 F601	*2 F602	*3 F603
E3	1A/125V	4A/125V	3.15A/125V
E2,EK	630mA/250V	4A/250V	3.15A/250V

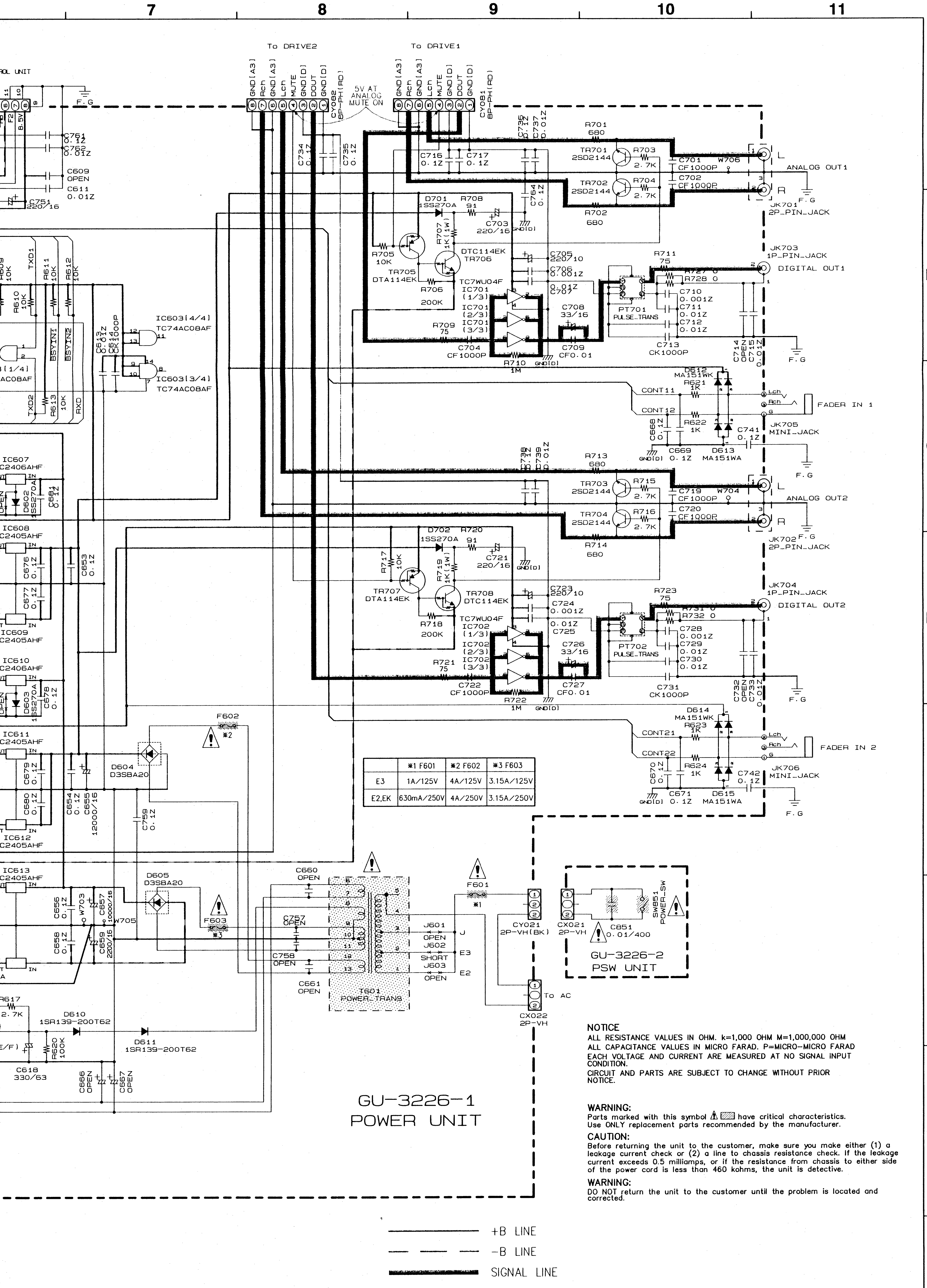
NOTICE
ALL RESISTANCE VALUES IN
ALL CAPACITANCE VALUES
EACH VOLTAGE AND CURRE
CONDITION.
CIRCUIT AND PARTS ARE S
NOTICE.

WARNING:
Parts marked with this syn
Use ONLY replacement part

CAUTION:
Before returning the unit t
leakage current check or (
current exceeds 0.5 milliam
of the power cord is less

WARNING:
DO NOT return the unit to
corrected.

SCHE
GU-322


7
8
9
10
11
A
B
C
D
E
F
G
H
To DRIVE2
To DRIVE1
GND(A3)
Rch
GND(A3)
Lch
MUTE
GND(D)
DOUT
GND(D)
CY062 8P-PH(RD)
CY061 8P-PH(RD)
5V AT ANALOG MUTE ON
F.G
8.5V
C761 0.1Z
C762 0.01Z
C609 OPEN
C611 0.01Z
C751 220/16
C734 0.1Z
C735 0.1Z
C716 0.1Z
C717 0.1Z
C736 0.1Z
C737 0.01Z
R701 680
TR701 2SD2144
R703 2.7K
C701 CF1000P
W706
TR702 2SD2144
R704 2.7K
C702 CF1000P
R702 680
ANALOG OUT1
JK701 2P_PIN_JACK
D701 1SS270A
R708 91
C703 220/16
C764 0.1Z
R707 1K(1W)
R705 10K
TR705 DTA114EK
DTC114EK TR706
R706 200K
C705 220/10
C706 0.001Z
C707 0.01Z
TC7WU04F IC701 (1/3)
IC701 (2/3)
IC701 (3/3)
R709 75
C704 CF1000P
R710 1M
C708 33/16
C709 CF0.01
R711 75
R727 0
R728 0
PT701 PULSE_TRANS
C710 0.001Z
C711 0.01Z
C712 0.01Z
C713 CK1000P
C714 OPEN
C715 0.01Z
JK703 1P_PIN_JACK
DIGITAL OUT1
D612 MA151WK
R621 1K
CONT11
CONT12
R622 1K
C668 0.1Z
C669 0.1Z
D613 MA151WA
C741 0.1Z
FADER IN 1
JK705 MINI_JACK
R609 10K
R610 10K
R611 10K
R612 10K
TXD1
TXD2
R613 10K
RXD
BSYIN1
BSYIN2
IC603(4/4) TC74AC08AF
IC603(3/4) TC74AC08AF
C613 0.01Z
C614 CK1000P
IC607 C2406AHF
D602 1SS270A
C681 0.1Z
IC608 C2405AHF
C676 0.1Z
C677 0.1Z
C653 0.1Z
IC609 C2405AHF
IC610 C2406AHF
D603 1SS270A
C678 0.1Z
IC611 C2405AHF
C679 0.1Z
D604 D3SBA20
C680 0.1Z
C654 0.1Z
C655 12000/16
C759 0.1Z
IC612 C2405AHF
IC613 C2405AHF
C656 0.1Z
W703
C657 10000/16
W705
C658 0.1Z
C659 2200/16
D605 D3SBA20
F602 ※2
F603 ※3
R617 2.7K
D610 1SR139-200T62
D611 1SR139-200T62
R620 100K
C618 330/63
C666 OPEN
C667 OPEN
C738 0.1Z
C739 0.01Z
R713 680
TR703 2SD2144
R715 2.7K
C719 CF1000P
W704
TR704 2SD2144
R716 2.7K
C720 CF1000P
R714 680
ANALOG OUT2
JK702 2P_PIN_JACK
D702 1SS270A
R720 91
C721 220/16
R717 10K
R719 1K(1W)
TR707 DTA114EK
TR708 DTC114EK
R718 200K
C723 220/10
C724 0.001Z
C725 0.01Z
TC7WU04F IC702 (1/3)
IC702 (2/3)
IC702 (3/3)
R721 75
C722 CF1000P
R722 1M
C726 33/16
C727 CF0.01
R723 75
R731 0
R732 0
PT702 PULSE_TRANS
C728 0.001Z
C729 0.01Z
C730 0.01Z
C731 CK1000P
C732 OPEN
C733 0.01Z
JK704 1P_PIN_JACK
DIGITAL OUT2
D614 MA151WK
R623 1K
CONT21
CONT22
R624 1K
C670 0.1Z
C671 0.1Z
D615 MA151WA
C742 0.1Z
FADER IN 2
JK706 MINI_JACK
GND(D)
Lch
Rch
G
C660 OPEN
C757 OPEN
C758 OPEN
C661 OPEN
T601 POWER_TRANS
J601 OPEN
J602 SHORT
J603 OPEN
J
E3
E2
F601 ※1
CY021 2P-VH(BK)
CX021 2P-VH
C851 0.01/400
SW851 POWER_SW
GU-3226-2 PSW UNIT
To AC
CX022 2P-VH
GU-3226-1 POWER UNIT
+B LINE
-B LINE
SIGNAL LINE

	※1 F601	※2 F602	※3 F603
E3	1A/125V	4A/125V	3.15A/125V
E2,EK	630mA/250V	4A/250V	3.15A/250V

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

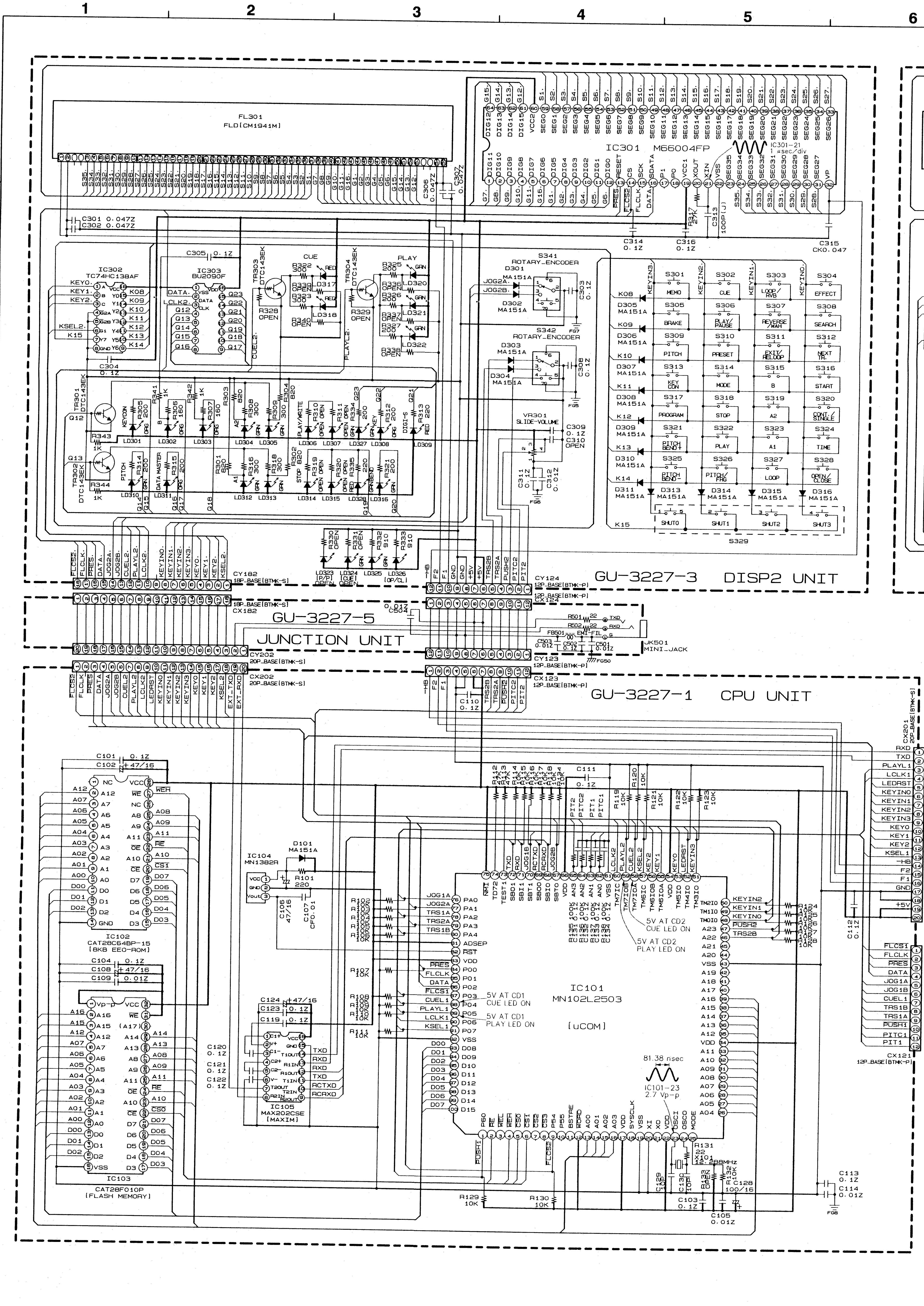
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

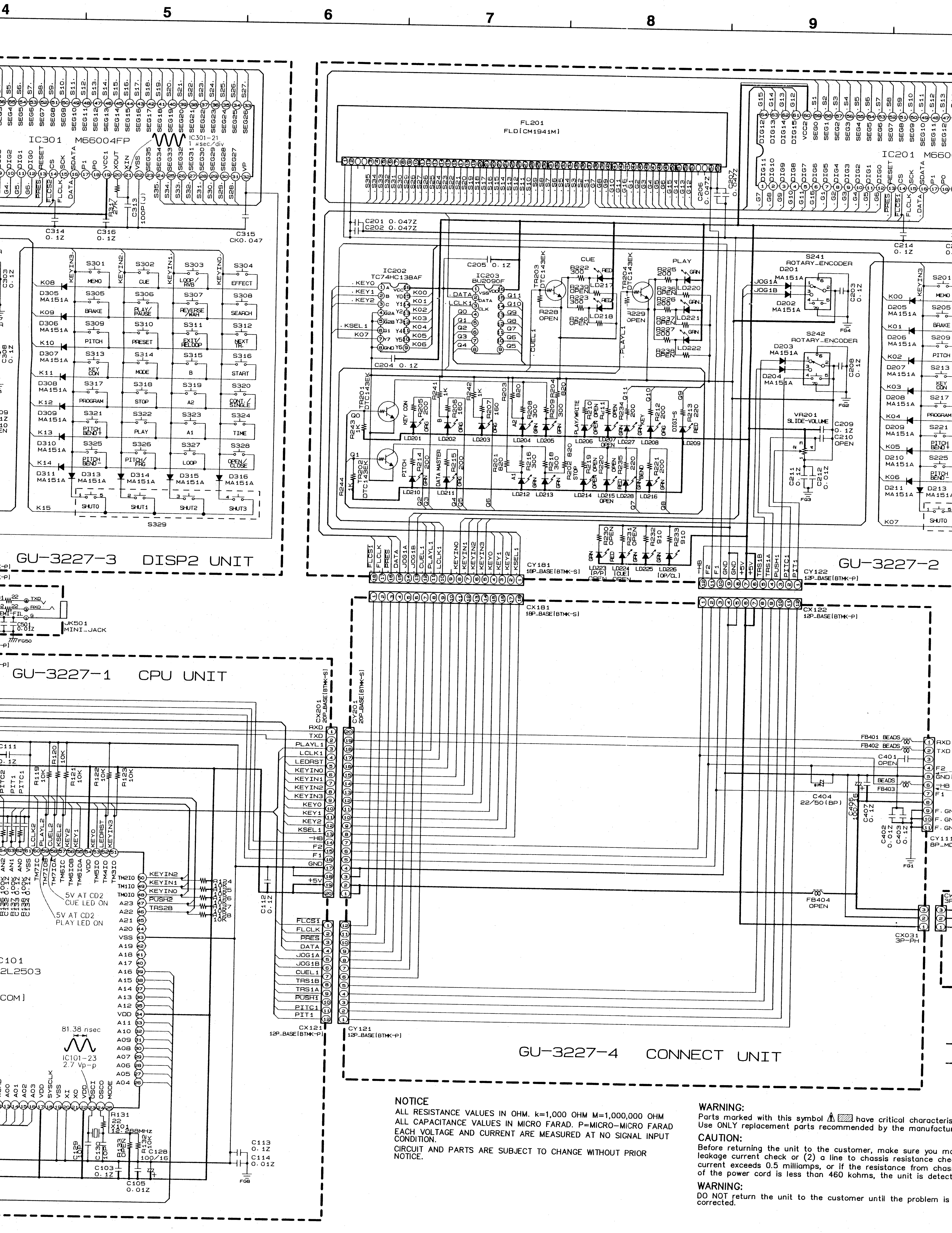
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (3/4)
GU-3226 POWER UNIT

SCHEMATIC DIAGRAMS (4/4)


1
2
3
4
5
6
A
B
C
D
E
F
G
H
FL301
FLD[CM1941M]
IC301 M66004FP
IC301-21
1 μsec/div
C301 0.047Z
C302 0.047Z
C305 0.1Z
C306 0.047Z
C307 0.047Z
C313 100P(J)
C314 0.1Z
C315 CK0.047
C316 0.1Z
R317 27K
IC302
TC74HC138AF
IC303
BU2090F
C304 0.1Z
TR303 DTC143EK
TR304 DTC143EK
TR301 DTC143EK
TR302 DTC143EK
CUE
PLAY
R328 OPEN
R329 OPEN
S341
ROTARY_ENCODER
D301 MA151A
D302 MA151A
JOG2A
JOG2B
C303 0.1Z
S342
ROTARY_ENCODER
D303 MA151A
D304 MA151A
C308 0.1Z
VR301
SLIDE-VOLUME
C309 0.1Z
C310 OPEN
C311 0.1Z
C312 0.01Z
S301 MEMO
S302 CUE
S303 LOOP/
S304 EFFECT
S305 BRAKE
S306 PLAY/PAUSE
S307 REVERSE/WAH
S308 SEARCH
S309 PITCH
S310 PRESET
S311 EXIT/RELOOP
S312 NEXT TR.
S313 KEY CON
S314 MODE
S315 B
S316 START
S317 PROGRAM
S318 STOP
S319 A2
S320 CONT./SINGLE
S321 PITCH BEND+
S322 PLAY
S323 A1
S324 TIME
S325 PITCH BEND-
S326 PITCH/FRG
S327 LOOP
S328 OPEN/CLOSE
S329
SHUT0
SHUT1
SHUT2
SHUT3
D305 MA151A
D306 MA151A
D307 MA151A
D308 MA151A
D309 MA151A
D310 MA151A
D311 MA151A
D313 MA151A
D314 MA151A
D315 MA151A
D316 MA151A
KEYON
PLAY/WRITE
DATA MASTER
STOP
DIGI-S
LD323 [P/P] OPEN
LD324 [CUE] OPEN
LD325
LD326 [OP/CL]
R330 OPEN
R331 OPEN
R332 910
R333 910
CY182
18P-BASE[BTMK-S]
CY124
12P-BASE[BTMK-P]
GU-3227-3 DISP2 UNIT
CX182
18P-BASE[BTMK-S]
CX124
12P-BASE[BTMK-P]
C504 0.01Z
GU-3227-5
JUNCTION UNIT
R501 22 TXD
R502 22 RXD
FB501 EMI-FIL
C503 0.01Z
C502 0.1Z
C501 0.1Z
JK501
MINI-JACK
CY202
20P-BASE[BTMK-S]
CY123
12P-BASE[BTMK-P]
CX202
20P-BASE[BTMK-S]
CX123
12P-BASE[BTMK-P]
GU-3227-1 CPU UNIT
C110 0.1Z
C101 0.1Z
C102 47/16
IC102
CAT28C64BP-15
[8KB EEO-ROM]
C104 0.1Z
C108 47/16
C109 0.01Z
IC103
CAT28F010P
[FLASH MEMORY]
IC104
MN1382R
D101 MA151A
R101 220
C106 47/16
C107 0.01
C124 47/16
C123 0.1Z
C119 0.1Z
C120 0.1Z
C121 0.1Z
C122 0.1Z
IC105
MAX202CSE
[MAXIM]
5V AT CD1
CUE LED ON
5V AT CD1
PLAY LED ON
5V AT CD2
CUE LED ON
5V AT CD2
PLAY LED ON
IC101
MN102L2503
[uCOM]
81.38 nsec
IC101-23
2.7 Vp-p
C111 0.1Z
R131 22
X101 12.288MHz
R132 10K
C128 100/16
C103 0.1Z
C105 0.01Z
R129 10K
R130 10K
C112 0.1Z
C113 0.1Z
C114 0.01Z
CX201
20P-BASE[BTMK-S]
CX121
12P-BASE[BTMK-P]
RXD
TXD
PLAYL1
LCLK1
LEDRST
KEYIN0
KEYIN1
KEYIN2
KEYIN3
KEY0
KEY1
KEY2
KSEL1
-HB
F2
F1
GND
+5V
FLCS1
FLCLK
PRES
DATA
JOG1A
JOG1B
CUEL1
TRS1B
TRS1A
PUSH1
PITC1
PIT1


4
5
6
7
8
9
IC301 M66004FP
IC301-21
1 µsec/div
GU-3227-3 DISP2 UNIT
FL201
FLD[CM1941M]
IC202
TC74HC138AF
IC203
BU2090F
S241
ROTARY_ENCODER
S242
ROTARY_ENCODER
VR201
SLIDE-VOLUME
IC201 M660
GU-3227-2
CY181
18P_BASE[BTMK-S]
CY122
12P_BASE[BTMK-P]
CX181
18P_BASE[BTMK-S]
CX122
12P_BASE[BTMK-P]
JK501
MINI_JACK
GU-3227-1 CPU UNIT
CX201
20P_BASE[BTMK-S]
CY201
20P_BASE[BTMK-S]
CX121
12P_BASE[BTMK-P]
CY121
12P_BASE[BTMK-P]
IC101
81.38 nsec
IC101-23
2.7 Vp-p
5V AT CD2
CUE LED ON
5V AT CD2
PLAY LED ON
X101
12.288MHz
CX031
3P-PH
GU-3227-4 CONNECT UNIT

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteris
Use ONLY replacement parts recommended by the manufactu

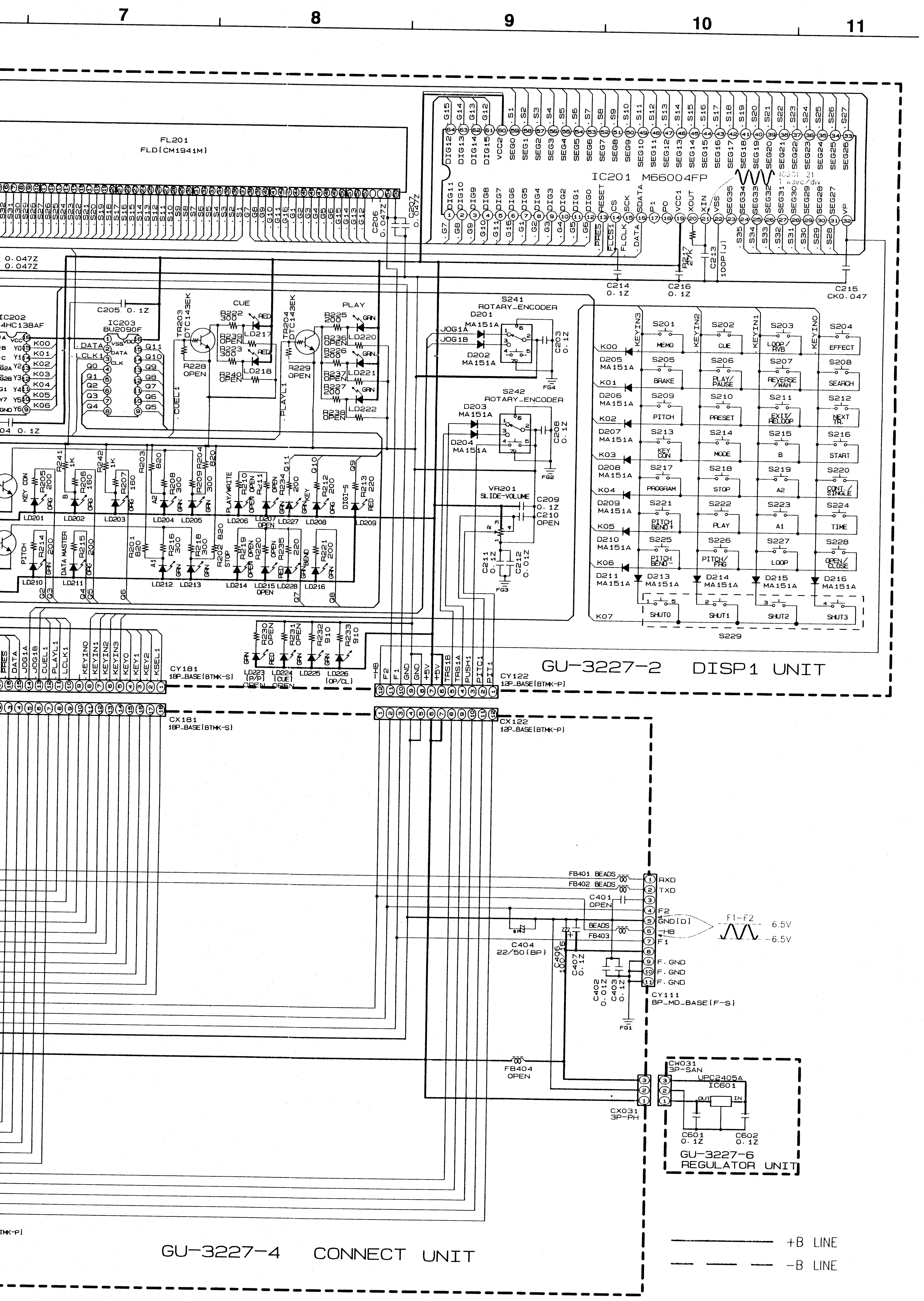
CAUTION:

Before returning the unit to the customer, make sure you m
leakage current check or (2) a line to chassis resistance che
current exceeds 0.5 milliamps, or if the resistance from chas
of the power cord is less than 460 kohms, the unit is detect

WARNING:

DO NOT return the unit to the customer until the problem is corrected.

SCHEMATIC DIAGRAMS (4/4)
GU-3227 DISPLAY UNIT


7
8
9
10
11
FL201
FLD(CM1941M)
IC201 M66004FP
IC202
4HC138AF
IC203
BU2090F
C205 0.1Z
TR203
DTC143EK
TR204
DTC143EK
CUE
PLAY
R228
OPEN
R229
OPEN
S241
ROTARY_ENCODER
D201
MA151A
D202
MA151A
JOG1A
JOG1B
S242
ROTARY_ENCODER
D203
MA151A
D204
MA151A
VR201
SLIDE-VOLUME
C209
0.1Z
C210
OPEN
C214
0.1Z
C216
0.1Z
C215
CK0.047
S201
MEMO
S202
CUE
S203
LOOP/RVB
S204
EFFECT
S205
BRAKE
S206
PLAY/PAUSE
S207
REVERSE/WAH
S208
SEARCH
S209
PITCH
S210
PRESET
S211
EXIT/RELOOP
S212
NEXT TR.
S213
KEY CON
S214
MODE
S215
B
S216
START
S217
PROGRAM
S218
STOP
S219
A2
S220
CONT./SINGLE
S221
PITCH BEND+
S222
PLAY
S223
A1
S224
TIME
S225
PITCH BEND-
S226
PITCH/FRG
S227
LOOP
S228
OPEN/CLOSE
SHUT0
SHUT1
SHUT2
SHUT3
S229
K00
K01
K02
K03
K04
K05
K06
K07
KEYIN0
KEYIN1
KEYIN2
KEYIN3
CY181
16P_BASE(BTMK-S)
CY122
12P_BASE(BTMK-P)
GU-3227-2 DISP1 UNIT
CX181
16P_BASE(BTMK-S)
CX122
12P_BASE(BTMK-P)
FB401 BEADS
FB402 BEADS
RXD
TXD
C401
OPEN
F2
GND(D)
HB
F1
F.GND
F.GND
F.GND
F1-F2
6.5V
-6.5V
C404
22/50(BP)
C407
0.1Z
C402
0.01Z
C403
0.1Z
CY111
8P_MD_BASE(F-S)
FB404
OPEN
CX031
3P-PH
CW031
3P-SAN
UPC2405A
IC601
OUT
IN
C601
0.1Z
C602
0.1Z
GU-3227-6
REGULATOR UNIT
GU-3227-4 CONNECT UNIT
+B LINE
-B LINE

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (4/4)
GU-3227 DISPLAY UNIT